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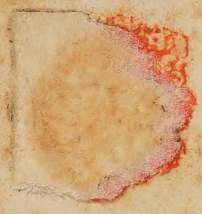

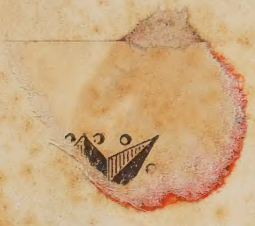

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A

MEMOIR

OF

JAMES JACKSON, Jr., M. D.

WITH EXTRACTS FROM HIS

LETTERS TO HIS FATHER;

AND

MEDICAL CASES,

COLLECTED BY HIM.

By JAMES JACKSON, M. D.

Professor of the Theory and Practice of Physic in Harvard University; and Physician of the Massachusetts General Hospital.

BOSTON:

PRINTED BY I. R. BUTTS.

1835.

WELLCOME
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TO

P. CH. A. LOUIS, M. D.,

OF PARIS,

Who was regarded by the subject of this Memoir as a second father, not with more admiration than filial respect and affection; — and

TO

FRANCIS BOOTT, M. D.,

OF LONDON,

Whose bright mind and pure and elevated virtues inspired the most ardent and sincere love in his young friend; —

The two men, to whom, among many, he felt most indebted whilst in Europe; —

With the respect and gratitude, which under such circumstances, a father must feel, this Memoir is respectfully and affectionately dedicated by

JAMES JACKSON.

Boston, April 15, 1835.

MEMOIR OF JAMES JACKSON, Jr.

The following pages contain a memoir of the life of my late son, James Jackson, Junior, M. D., with extracts from his letters and a selection from the medical cases collected by him, principally in Paris. I have been induced to print these cases by the solicitation of those, who knew how he had collected them. I have been induced to write the memoir in consequence of the suggestion of those who knew something of him and whose opinions I respect. In some points the task has been grateful to me; sad, though it may seem, for a father. I thank God that I have been able to maintain my cheerfulness and to attend to the common occupations of life since the deplorable loss, which I suffered in his departure from this world. But every hour has he been in my mind. In every occupation, in almost every conversation, however little others could see the connection, his image has been before me. It has been a beautiful image and has not checked any pleasure, nor even any gaiety, in which I thought that he could have joined.

Under any circumstances I might seem an improper person to give his history, and my statements may be deemed scarcely worthy of credit. Who will believe that I shall be impartial?

I can say however that I would not willingly be guilty of exaggeration, if it were only from a respect to the love of truth, which formed the most distinguishing trait in his character. He loved me as few sons love their fathers. Of this I have had ample and constant proofs. But he loved truth better, and would not subscribe to any opinion because it was mine, though he was quite willing, in his conduct, to submit to my direction and control.

But, if I draw a fancy picture, while I design to paint the character of my son, if that presents a young man who devoted his time most assiduously to the acquisition of useful knowledge, who cultivated at the same time his best moral affections and acted from the highest love of virtue, and who thereby secured the friendship of the wise and good, the fiction at least may have some good influence on the young and inexperienced. At least it may lead them to reflect on the immutable connexion between virtue and happiness.

The subject of this story was not indeed rewarded by long life. But in this age will it be maintained that long life is the greatest of blessings? This is a topic, on which I shall not enlarge; but I will only say for myself, which I do most sincerely, that I would not have added a year to my son's life by an habitual and allowed indulgence in a single vice.

The history of my son's life is very simple and it may be told very briefly. He was born on the 15th January, 1810, was graduated at the University in Cambridge in 1828, and then engaged in the study of medicine. This he did under my direction and as my pupil. He continued as such till the April of 1831, and during this time he attended the medical lectures of our University and saw the practice of the Massachusetts General Hospital. In the spring, 1831, he went to Paris, where

he arrived in May, and remained till July, 1833, except during a visit of six months to Great Britain and Ireland in the spring and summer of 1832. He reached home at the end of the summer, 1833, and was graduated as Doctor of Medicine in our University in February, 1834. He was now prepared to engage in practice, and took rooms for himself in Franklin-Place. He was thus brought to the starting place of active life, and under circumstances the most flattering and the most grateful, when he was arrested in his course. Exactly at this point he was arrested. His arrangements being made, he sent an advertisement to the public papers, which appeared on the 5th of March, and on that day he was taken sick so as to lodge at my house instead of occupying the rooms, which he had just announced as his residence. This sickness was his last, and he died on the 27th of the same month, being in his 25th year.

Thus cut off before he had yet been tried in the serious business of life, and having passed his brief course without encountering any of the trials, to which many men are subjected, it would seem that his story could hardly afford any details of interest except to his own family. And yet he did excite an interest during his life in very many friends, abroad as well as at home, and that of the warmest kind; and his loss has been deeply mourned by those, whom I never saw, and to whom he was recommended only by his own conduct. There must then have been something in him to have excited this interest, which I shall call deep and ardent, disregarding the imputation to which I subject myself of a blind partiality. This something was in his character. If he is to be commemorated it should be by delineating that character; and while doing this I shall be led to detail, though it may not be in exact order, the events of his life as illustrating it. Any friend in pursuing this course would be thought liable to run into eulogy instead of giving a

true description of the subject of his discourse; a fond father must certainly be subject to this suspicion. Those who know the truth in this case must decide whether this suspicion is justified by what follows. I may however premise that I shall not attempt to write coldly, while I shall endeavor to keep in mind that my business is not to display my own feelings toward the beloved subject of my discourse, but to draw a picture of one whose features are more perfectly engraved on my mind than on that of any one else.

From his earliest age my son always manifested great cheerfulness of temper and gaiety of heart, so that he was never long depressed by trouble of any kind. He was always ready to sympathize with those about him, and he loved to engage their sympathy in return. He was not contented without constant action, except when engaged in study or other occupation. These characteristics are common enough in boyhood, and did not distinguish him among his fellows at that stage of life. It was by myself only perhaps that his indomitable gaiety of heart was then noticed; though I also remarked, very early, that his mind was capable of being engaged in the most solemn subjects. From these characteristics he was often boisterous and annoying to those about him, but he was so good-humored they could not long be angry with him. He had very little ambition to gain distinction, or to be a leader among his comrades, but delighted to join in their sports on terms of equality, as anxious that they should be pleased as to have his share of the sport. He was agreeable to his young friends without being distinguished among them. His schoolmaster loved him; but had to punish him continually for the sin of laughing, of which he could not break him however. He would strive at times to get a high rank in his class to please me, for he always loved me most ardently; but he seemed not otherwise to value

the distinction. Once, when a little boy, he had kept at the head of his class for two or three days, and then a younger boy got above him. I reproached him for permitting this. But he said, with great naivetè, that the other boy "ought to be at the head sometimes." I hardly gave him credit at the moment for this generous wish for the gratification of his rival, but his companions in later life will agree with me in believing that it was the result of that interest in the happiness of others, which he manifested more and more strongly as long as he lived.

In college his ready sympathy led him at first into the company of those, who were most gay, and for a few months he joined in their pleasures. At the end of six months the excellent president gave me warning that my son had become intimate with those, whose company was the most dangerous. This would have caused me great distress but that, happily, my son had recently given me the same information and had told me that he had discovered his danger; in fact, as soon as he perceived the vices of his associates, he no longer sympathized with them; he had broken with them. It was so; and his connexion was never afterwards renewed with them, nor with those who were like them. He now happily formed an intimacy with one who encouraged all his virtuous aspirations, and he began to cultivate, upon principle, a purity of heart, of which the fruits were forming in all his subsequent life. He was not led into habits, nor into any feelings of austerity. Gaiety he could not dismiss; it was ever springing up in him. He was guilty of imprudences like others. But he constantly studied his duty, he cultivated more and more the best principles of action, and from year to year his standard of excellence was placed higher and higher. He never attained a distinguished rank in his class by an exact attention to his collegiate duties, a circumstance which I do not mention in commenda-

tion. Yet without my knowledge, until long afterwards, he established for himself certain rules of action and habits of industrious study, from which he seldom deviated subsequently, and was really storing his mind with valuable knowledge. I was not aware of his industry, though I thought that I watched him closely, till he had left the college. He did not tell me of it, though he was very open and ingenuous in telling me his feelings and his errors. When he began the study of medicine under my eye, he gave himself to it with an energy and industry that surprised me. I thought at the moment that he was resolved to make up for past negligences, but that his zeal would probably soon abate. I did not yet understand him. Subsequently my only apprehension was from his too great devotion to his studies, which constantly went on increasing. I presumed that the temptations to pleasure in Europe would draw him off from laborious study quite enough; but not so; there, even more than here, he spent his strength, without reserve, in his professional pursuits; though he meant to keep himself within the limits of safety. The only temptation, which he could not at all resist, was that furnished by the invaluable opportunities, there offered to him, for the increase of useful knowledge.

When he went abroad his reading on professional subjects had been so extensive and his habits of observation so well formed, that I thought him fully prepared to avail himself of the advantages he might derive from the excellent schools of Paris, London and Edinburgh. I dared not then say so even in my own family, for I feared the evil consequences of too much praise; but I regarded his acquisitions as very extraordinary for a student of his standing, and therefore let him go at an earlier period than that at which I commonly advise young men to take the same step. Those who are acquainted

with medical literature will believe that I did not overrate his diligence after considering the following statement. Before the termination of the second year of his pupilage he went through the Epistles of Morgagni on the seats and causes of diseases, as translated by Alexander, in three thick quarto volumes. He took notes of what he read, and as he went on compared with it the invaluable work of Baillie on morbid anatomy, another quarto, with the plates accompanying it. This he did indeed in the quiet of the country, but he took proper time for exercise, and did not seem to me more industrious than at other periods. He however completed the whole in seven weeks. Nor did he read this work, as a task, without possessing himself of its contents. He read it with great interest; and he fixed in his mind so many of its details, that by the aid of his short notes he was able to refer to it afterwards. Thus I find in his early autopsies in Paris, which he entered in his common-place book, many references in the margin to cases in this great store-house of post-mortem researches. Indeed I have not been acquainted with any one, who was so intimate with the details of this work, as he was. Immediately after this, and before his second year of medical studies was terminated, he wrote a long dissertation on pneumonia, in doing which he consulted all the writings on the subject which he could get at, both those expressly on it and those which embraced it with other subjects in systematic works. This dissertation gained him the Boylston medical prize from a committee, among the members of which was Dr. Ware. Dr. Ware spoke to me of this work at the time in terms of great commendation, and I confess that, when I read it, I was fearful that it would be supposed I had rendered assistance in the preparation of it, which in such a case would have been improper. But in fact I had only pointed out the sources of in-

formation and had made some general remarks on the subject, as I should in conversation with any pupil. I was aware that he was writing on the subject, but thought at the time it was only an exercise as a member of the Boylston medical society, not a dissertation for a prize.

I have stated these things as examples of his industry. I may add, that in the period of his medical studies, before he went to Europe, scarcely two years and a half, if I deduct the time employed on journeys, he had read a very large proportion of all the valuable English standard works on medicine, and very many of the French, frequently and carefully consulting older works in other languages when referred to, especially when facts were concerned. At the same time he had engaged as fully as most others in dissection in its proper season; he had attended the hospital most punctually except in the summer season; he had seen much of disease elsewhere, particularly at the House of Industry, where Dr. Fisher was then physician, and frequently invited him when there was anything particularly interesting; and he took notes of lectures and of everything which came under his observation, especially of the autopsies which he attended, so that he had covered twelve hundred folio pages of his common-place books, when he left home.

It was thus prepared he went to Paris, there to take care of himself when just past twenty-one years of age. Thus far, except two or three journeys, he had lived in a limited circle under the eyes and care of his friends. At college, even, he resided principally in a private family of the first respectability, and of the greatest moral worth, where he had been treated as a child and a friend, and had been allured by kindness to submit to wholesome restraints and to the friendly warnings of wisdom and experience. I could not dismiss one so inexpress-

ibly dear to me without anxiety, though satisfied that it was wise that he should go. The following extracts will show something of the state of his mind, and of my own. They will bring before the reader the true feelings and principles which then reigned in his heart, and if I may write about him at all, I see not why I may not produce them.

EXTRACT FROM MY LETTER TO HIM, APRIL 9, 1831.

"I look forward with sanguine hopes of benefit from the opportunities you will have. I feel satisfied that you will not omit to avail yourself of them. It is this hope of benefit to you which reconciles me to your absence, for I have already begun to look to you as my most interesting companion for the remainder of my days. As to the hazards to which you are exposed, I certainly do not disregard them; yet I shall not allow a regard to them to make me unhappy. At least, I think so now. There is a risk of life, — and it would indeed alter the aspect of my future days, if I did not hope to have you by my side and to leave you behind me in this world. But this is the smallest risk by far. Whether we pass a few short years together in this world is comparatively of little consequence. Whether we meet in a better world is of immeasurable importance. This depends on ourselves; — on the strict regard to morality which we both maintain; — a morality in Dr. Holyoke's sense, which includes piety, — a regard to our Maker, as well as to ourselves and fellow-men. Now I am not insensible to the temptations, to which young and old are exposed in Paris and London. I can think of them till I tremble. But my trembling is stilled by the confidence I place in you. This confidence is sincere and strong. It is not un-

limited, but it is as great as it can be in any young man. I know that your fondness for society, arising from the best feelings, is very strong; but I feel assured that you know how to control it, — and that your principles are strong and of the best kind. I shall not therefore allow myself to be anxious; and it is more to tell you this than to insinuate any cautions, that I have been led into this long statement of my views and feelings. In temptation, I think you will first think of home, — and then cast your eyes higher, — to the home we all ultimately hope for, and to the Father who is better than any earthly parent. I referred to the dangers of society; — I wish to add that among men of the world, and I may say such gentlemen as a traveller meets, there is a sort of presumption conveyed in conversation, that no one feels bound very strictly by the rules of morality. Now one need not turn knight-errant, nor missionary, to beat down the obnoxious principles thus indirectly maintained. But, on the other hand, I have never found any society, in which I needed to remain, in which a gentleman was bound to assent to such principles, — or in which he might not declare his dissent from them, when he was compelled to speak of them directly. In short, a man never loses, but almost always gains with the worst men, by pursuing an honorable and virtuous course. The share of reputation, which you have yourself gained, while leading a quiet and you may almost say, a secluded life, shows you that a man gains reputation fully in proportion to his merits. Some persons must see your course, — and by them, even while they do not think of doing so, it is published and fixes your character. Not that a regard to character is the highest motive to action, but I was led to speak of it in another view, viz.; that a regard to it in the eyes of those about you, need not lead you to make sacrifices to their vices and follies."

The letter from which the foregoing extract is made, reached my son in New-York, on his arrival there, after sailing upon the Hudson, and visiting the Trenton Falls. In his reply, of which the greater part follows, he refers to the scenes, in which his mind had been delightfully engaged.

"New-York, April 15, 1831.

"My dear father, —

"My heart beats, and my eyes fill, and my hopes are brightened, and my resolutions are strengthened, as I advance in reading your kind letter of affection and advice. Be assured I will not neglect the opportunities which I am about to enjoy. My constant prayer is to God, that he will give me strength, moral and mental, to improve them to the utmost. I have already, sometime since, said to you that, were it not that I may with every reason expect to be in your society and under your guidance again on my return, I would on no account visit Europe. I feel and know that my opportunities for improvement during any two years, which I shall be absent, would be much greater at home than any I can obtain abroad; — but both have their peculiar advantages, and trusting in the mercy and providence of God, who has already poured upon me so many blessings, I feel a confident hope that I may enjoy both without foregoing either.

You next speak, my dear father, of the temptations abroad to young men. I, too, can and do think, and have oftentimes thought of them, till I tremble. I feel myself to be weak, weaker than I should be. I am not phlegmatic; — I have not yet learned to be master of myself; — I am yet, too often, much too often, the slave of circumstances. I feel that this is to be the toil and study of my life, to become master of

myself. I am learning each day, more and more, that it is the education of the immortal part, which should and must demand man's most serious and untiring attention. I begin to feel too that it is his highest happiness to cultivate it. I see the difficulties with which I must contend, and I feel deeply conscious of my moral weakness ; — but again I feel a sort of confidence in remembering that the Creator has given to man strength to resist all moral evil, and in hoping and praying that he will enable me to exert it. The future, with all, especially with a young man, is uncertain ; — but for all that is important it is in our hands ; — an awful responsibility, indeed, but yet ennobling and encouraging. One thought is most cheering, — we may depend upon it with security, — in the right conduct of the future, we have the certain aid and assistance of our all-powerful and benevolent Father, who will point us to the right path and safely conduct us over it, however rugged, if we will but open our eyes to see, and our hearts to accept, instead of blindly refusing his kind offers. My dear father, this is no affectation ; — it is no unmeaning rhapsody ; — my mind for some time has been becoming more and more convinced of the *essential importance* of these subjects, and I promise you the last week has not been spent in vain ; — not only has my mind been improving ; — my heart, too, is better for what I have seen ; — it is good for me to have been the spectator of these majestic works of the Deity in the natural world around us. My heart has been warmed with a sense of his benevolence, and my mind opened anew and more strongly, to a conviction of his power and greatness.

In anticipating my future career in life, my mind is filled with what ? I can tell you, for I have spent much time during the last three months, in a serious consideration of the subject, and feel that I have arrived at somewhat more definite views than

I had previously entertained. I would divide all the objects of my aim and efforts into two classes, — the essentials and the desireables ; — and in a few words they are these. Among the first, are a moral character, in the fullest acceptation of the term ; or in other words a life of virtue, so spent as shall be acceptable to God, and render me fit to enjoy the blessings of the virtuous ; an honorable and useful exercise of my profession ; — these two will perhaps include the only remaining essential, viz. such a situation in society, as to property, respectability, and so forth, as every young man brought up, as I have been, feels it his duty to expect and provide for.

Among the second, I would reckon the pleasures of social life, a handsome and independent property, and a high profession a reputation. The time has been, and that not very long since, when I looked upon this last as the most important of all. But I am now wiser. I have not ceased to value this abstractedly as much as before ; but its relative place among the objects of my desire is changed, — I trust irrevocably changed.

One word more on this subject, and I have done. You say it is rather to express your confidence in my principles, than to insinuate any cautions, that you have written me so fully on this subject. Trust not too much in my principles. At this moment they are as firm and as virtuous as I could wish ; but I have told you that I am weak, and have yet to learn the severe lesson of self-denial. For your own comfort and happiness believe me strong if you will ; but for my good, believe me weak. It is my sincere wish and desire, I may almost say command, (for in such matters the child may command the parent,) that you will often remind me in your letters of the temptations to which I am exposed, and the incentives to avoid them. Do not think that I am writing words which mean nothing. It had been my intention for some weeks past

to write you, before I left the country, on this very subject; to request your direct and constant aid in the preservation and improvement of my moral character. I hope that you will read and understand this request literally; as much so as any I ever made for a book to improve my mind, or a dollar to clothe my body. One duty yet remains, — a cheerful and a pleasant one, and yet one which I can perform but too inadequately; — it is to express my gratitude to you; to express to you all that I feel would be impossible; — perhaps also it would be unnecessary, as you must know it already. It might have been expressed more fully, and most becomingly in the actions of my past life; but it has not been. No mode is now left me, but by words and my future conduct. No words that I can use, can ever exhibit to you my real feelings; and for my future conduct I fear, yet hope. The duties of a parent to his child, which your approving conscience must tell you in more audible tones than I can utter, have been by you most strictly exercised, call for a correspondent gratitude from the child, none the less because they are the *duties* of his parent. But in my case, there is something more than this. Though I love to dwell upon the relation, which exists between us, and the circumstances and scenes and events, which have arisen from that relation; yet I have sometimes taken another view of the subject. I have considered the relation of parent and child as adventitious or accidental; — I have looked upon you and myself as two beings whom God had placed upon this earth, and whom accident had brought together; I have then thought of how much I was indebted to you for all the principles and knowledge and powers that I possess; — but, my dear father, I will stop. You see what is in my mind, — I have been writing you, till I am getting too much excited; — but it is a holy excitement, and will do me good. My prayer is to

God, that we may meet again in this world, — but I know it is uncertain, — my prayer and efforts too are and shall be, that my life may be so spent as to meet you in another world, if not in this, which may God in his infinite mercy grant."

It is easy for a young man to make promises in any situation. We all know how uncertain must be the strength of his resolution when brought to trial. I certainly should not have given these extracts, if I did not believe that my son's conduct abroad was in full accordance with the promises implied in them. That he was always wise and discreet is not to be presumed. But, if all who knew him did not combine to deceive me, and if, also, evidences of every kind, which I could examine, were not fallacious, his life was such, when out of my sight, as it had been at home; — marked by moral purity, as well as by incessant industry. The abundant testimonials of his industry which I now possess, specimens of which are in the following pages, show that he had not time to engage in those pernicious indulgencies which too often engross young men in the cities of Europe. Indeed, I would not intimate that he was singular in this respect. I gladly avail myself of the occasion to state that the medical students from this country, with very rare exceptions, are too much occupied with their professional studies, when in Paris or London, to allow much time to the ruinous pleasures of those great cities. This may perhaps be fairly attributed to the very interesting character of those studies.

In Paris my son attended principally in three hospitals, viz.; La Pitiè, St. Louis, and that for sick children, (Hopital des

Enfans Malades.) In the first of these he saw the practice of M. Louis and M. Andral, and heard their clinical lectures. It was here he spent most of his time. In the second, (St. Louis,) he attended to diseases of the skin and to the lectures of M. Biett. It was not possible for him to give time for a frequent attendance at the Hopital des Enfans Malades, at the regular hours, without omitting his visits at La Pitiè. He was, however, so fortunate as to obtain permission to go with the internal, or house-pupil of that hospital in his evening visit. He was thus able, no other pupil being present, to examine more minutely the numerous cases there collected, than he could have done in any other way.

The liberality of the French government, for it is by the national government that the hospitals are maintained, permits foreigners to join their own pupils in attendance on their hospitals without any fee. The liberal feelings of the physicians and surgeons of those hospitals lead them in like manner to give instruction to all, who will attend to it, without any pecuniary reward. Of the privileges thus granted my son partook with others. He had not any special introduction to the medical gentlemen on whom he attended. But he received from them not merely favors, but such substantial services, that I am bound to acknowledge them in giving this account of his life. I mean, however, also to adduce the services thus rendered him, as the evidence of impartial witnesses in proof of his merit as their pupil. I refer particularly to M. Louis and M. Andral. By the latter he was treated not only with civilities, to which a common stranger could have no claim, but he was indulged in the favor of free intercourse at once most flattering and most useful from such a source. I can scarcely describe with how much reverence for the genius of this eloquent professor, and with how much gratitude these favors were received.

By the former, M. Louis, he was distinguished so peculiarly, that I shall take the liberty to print two of M. Louis's letters to me, least I be suspected of exaggeration. There grew up between them a friendship of no common kind. M. Louis treated him with as much kindness and confidence as he could have shown to a son; and James felt toward him an affection second only to that which he experienced toward myself.

The acquaintance commenced by very flattering attentions from M. Louis, to his young pupil, at a period, when even his name was probably unknown to his master. This gave my son confidence in addressing him. Subsequently with two excellent friends from Philadelphia, he requested from M. Louis, private instructions on auscultation and percussion. They offered compensation for the time and trouble, which he would bestow on them. The compensation was not such as could have been an inducement to M. Louis, yet he complied instantly with their request. They had not dared to promise themselves this success, and had almost feared that he would regard them as too presumptuous. They were transported with the prospect before them, and still more with the excellent instruction which they obtained in consequence of it. Soon after this, the epidemic cholera appeared in Paris. The part which my son took at this time, I shall state more distinctly by itself; but at present I refer to this period as the time, in which the acquaintance of my son with both his great masters, became more intimate. When he left Paris, after having studied this disease, at the end of April, 1832, M. Louis manifested a regard for him in terms the most grateful and most flattering. Venerating him, as my son now did, his affectionate heart knew not how to respond to so much kindness. On his return to Paris, in the following autumn, he at once was admitted to the full friendship of his master, and, while he

remained with him, their intercourse was of the most confidential character; and to the pupil was most instructive.

I must now be permitted to give the letters before mentioned, to show that I have not exaggerated the favorable opinion of M. Louis toward my son.

TRANSLATION OF LETTERS FROM M. LOUIS TO DR. JACKSON.

"SIR, MY RESPECTED BROTHER,—

"I have received with gratitude the letter you did me the honor to write me in regard to your son and his memoir upon cholera. I give you special and hearty thanks for having afforded me so good an occasion to speak of one, toward whom I entertain sentiments of real friendship as well as of esteem.

It did not require much time for me to appreciate fully the sagacity and talent, which your son possesses, in the observation of nature. I had remarked these characteristics in him, before I knew who he was. Soon afterwards, learning that he would ere long return to Boston, I pointed out to him the advantage it would be for science and for himself, if he would devote several years exclusively to the observation of diseases. I now retain the same opinion and am strengthened in it; for the more I become acquainted with, and the more I notice him applying himself to observation, the more am I persuaded that he is fitted to render real service to science, — to promote its progress. I find that he would be well pleased to follow for a certain period the vocation, for which nature has fitted him; but he has stated to me that there are many difficulties, which would prevent his devoting himself exclusively to observation for several years. But can these difficulties be insurmountable?

Must we compel ourselves to believe that a man, whom nature has peculiarly qualified for observation, cannot be permitted to exercise the peculiar talents bestowed on him. For my own part I cannot admit the belief; I hope and trust that the difficulties, of which Mr. Jackson has spoken, will disappear.

Let us suppose that he should pass four more years without engaging in the practice of medicine, what a mass of positive knowledge will he have acquired! How many important results will he have been able to publish to the world during that period! After that he must necessarily become one of the bright lights of his country; others will resort to him for instruction, and he will be able to impart it with distinguished honor to himself. If all things be duly weighed, it will appear that he will soon redeem the four years, which men of superficial views will believe him to have lost.

It is with the utmost seriousness, sir, that I write to you thus. It would not be without the deepest conviction of the advantages of the plan I propose, that I should offer my advice on a subject, on which I have not been consulted. It is not for the sake of making to a parent some grateful remarks about his son, that I have pointed out to you how much may, in my opinion, be hoped from the talents for observation, which belong to Mr. Jackson; but simply to render homage to truth. Excuse me then for the step I have ventured to take, and believe that, if I had not felt that I had in this case a duty to fulfil, I should not have offered to you my advice, nor addressed to you my petition; for it is rather a petition I have addressed to you, than advice that I have given you. How could I venture to do the latter?

Nevertheless in reading over my letter, it seems to me to betray the tone of an advocate who is pleading a cause; and I would willingly begin it anew, were I not afraid that from

my deep conviction of the truth of what I have stated, I should relapse into the same fault. Accept it then, sir, such as it is, with indulgence, and believe that no one here is more sincerely attached to your son, or entertains for him a higher esteem than myself. Above all, listen to the suggestions, which I have ventured to make; and may my wishes that your son may devote himself exclusively to observation be ultimately realized; for it is to that point I constantly return.

I conclude by renewing to you my thanks, and beg you to be assured of the sentiments, &c.

(Signed,) Louis."

Paris, October 28, 1832."

"SIR, MY RESPECTED BROTHER,—

"I thank you most sincerely for your last letter and particularly for the details into which you were kind enough to enter with regard to your son. Nothing certainly could be more grateful to my feelings; for it is almost a mark of affection for myself, and I feel almost worthy of it from the strength of that, which I bear to your excellent son. He will soon leave us; but his name will long be mentioned among us, and I hope that the ocean, which is to separate us, will not be a complete barrier to our intercourse.

I feel more than any one else how much you must long to see as soon as possible a son, whose profession is the same as your own, and with whom it will be so delightful to you to converse respecting it. Indeed, I never thought of inducing you to leave him with us in Europe for four or five years. I love in Mr. Jackson the man and the physician; but he is a son, and you are a father; and though I have never known the delights of paternal affection, I should not have regarded

as possible the sacrifice which you understood me to propose to you. My only wish was that you should allow your son to devote himself exclusively to observation, for several years in Boston. I recommended this to you, because no one is more capable than he is of cultivating science and consequently of promoting the progress of practice. For what is practice but science brought into daily use?

Think for a moment, sir, of the situation in which we physicians are placed. We have no legislative chambers to enact laws for us. We are our own lawgivers; or rather we must discover the laws, on which our profession rests. We must *discover* them and not invent them; for the laws of nature are not to be invented. And who is to discover these laws? Who should be a diligent observer of nature for this purpose, if not the son of a physician, who has himself experienced the difficulties of the observation of disease, who knows how few minds are fitted for it, and how few have at once the talents and inclination requisite for the task? The inclination especially; for this requires that the observer should possess a thorough regard for truth, and a certain elevation of mind, or rather of character, which we rarely meet with. All this is united in your son. You ought, for in my opinion it is a duty, you ought to consecrate him for a few years to science. This, sir, is my conviction, and I hope it will be yours also. I know very well that every one will not be of the same opinion; but what matters it, if it be yours; if you look upon a physician, as I do, as holding a sacred office, which demands greater sacrifices than are to be made in any other profession.

Believe me that I do not forget in all this the force of established usages. I think of all this; but I am none the less convinced that Mr. Jackson, entering into practice after three or four years, with the esteem of all his professional brethren,

and surrounded as it were with their respect, will very rapidly regain all which he may have sacrificed and much more.* At all events my best wishes and those of all his friends here, will follow him, whatever may be his course; and I shall always esteem myself happy in having known him. Permit me, sir, to assure you of this, and of the sentiments of respect and affection, with which I am, &c.

(Signed,) LOUIS."

PARIS, MARCH 22, 1833."

To the foregoing letters, I might add others, not only from M. Louis, but from other gentlemen in Europe, addressed to me after my son's death. But, while I am extremely grateful for the kind sympathy they manifest toward me, and have felt assured by them, that my partiality has not led me to a very extravagant estimate of the loss I have suffered, I cannot think it necessary to add any further testimony to that which I have given above.

The period of the epidemic cholera in Paris was one of the greatest interest and of the greatest anxiety to the subject of this memoir. Until the end of the winter 1831-2, the accounts which we had received in this country of the cholera in Europe, were of the most alarming character. We knew that, arising many years previously in the hot climates of Asia, this deadly malady had passed in a north-west direction into the coldest regions of Europe, and was thence extending itself over that quarter of the globe. Why it thus spread, and whether it was propagated by contagion, many persons were ready to decide upon general principles; but precise facts, on

* See note A.

which to form a decision, were not yet furnished. One thing was certain, that it affected great numbers, wherever it went, and proved fatal to a large proportion of those affected. Regarding my son as comparatively without friends in a foreign country, not then knowing the kind feelings already entertained for him by those most capable of taking care of him, I wrote to him urgently to fly before this plague, and even to leave Europe, should the disease invade at once France and Great Britain. Such letters, and such only had he received on this subject, when the disease appeared in Paris, on the last days of March. It had already been introduced into England, but had there been comparatively limited in its extension. In Paris, it extended at once to very large numbers, and assumed within one week the most terrific aspect; such as to excite within that short period the most outrageous mobs, under a belief that the poorer classes had been designedly poisoned. On the sudden outbreak of this most alarming disease, my son's mind was exercised in a distressing manner. The following extract from his letter of April 8th, which will be given in full among his letters, will describe his feelings, and give the result to which he was brought in this dilemma.

"I almost weep to write you again from Paris. It is now the first moment of my life, that I have been placed between two duties, each strong, each binding, and where my difficulty is to decide which is the most so. But I have decided, — as I know, against your wishes. God grant that circumstances may be such that you shall soon accord with me, when the time is passed. A medical man has his duties; — I am a boy in medicine; — granted. But I am like the other Americans here about me. An opportunity is offered us of studying a disease, which will probably visit our hitherto untouched country. Were the disease about you, would you fly? You

could not, for the public would look to you. You would not, for your sense of duty would prevent you. I am, in a measure, in the same condition."

The moment was a fearful one, most assuredly. The mortality in Paris rose to eight hundred a day within three weeks from the first appearance of the disease. It was in the Hotel Dieu my son first saw the victims of it in any number, and the emphatic words in which he described it were nearly the same, as were often used by others. "The disease is death;" he said, "truly, at Hotel Dieu, where I have seen fifty and more in a ward, it is almost like walking through an autopsy room; in many, nothing but the act of respiration shows that life still exists. It is truly awful."

At a meeting of the Academy of Medicine, on the evening of 3d of April, cholera was the subject of discussion, and various suggestions and opinions were offered by men of sanguine characters. My son followed M. Andral on his leaving this meeting, and asked permission to visit the hospital (la Pitiè,) at that hour, with the view of seeing any new cases which might have been admitted. M. Andral kindly took him into his cabriolet and gave him every facility. "Our conversation," says my son, "turned naturally upon the cholera, and turning to me with a certain nod of his head, which is peculiar to him, and to me very significant, for I know that it is a thinking head which nods, — 'I am deeply interested,' said he, 'my mind is totally occupied by this subject; but as yet I see nothing which is not vague; — but I shall go to work upon it, and I indulge the hope of arriving at some valuable results.' This is not his exact language, but it is the idea; — and that idea inspired me; it seemed as if he had imparted to me a new feeling; I may call it a new *besoin*, so essential have I since found and still find it to satisfy and to yield to it."

James's resolution was fixed and he felt only an ardor to study this plague under his excellent masters at la Pitiè, hoping he might make his knowledge useful in his own country, if that also should be invaded by the universal epidemic. Accordingly he devoted his whole heart and mind to this study during the month of April, only taking the precaution to lodge in a healthy part of the city, to be cautious in his diet, and to take regular exercise in the open air. He pursued the plan of his master Louis in taking down with minuteness and fidelity the cases, which came under his observation, and the results ascertained by dissection in the fatal cases. This labor occupied his whole time; he almost lived in the hospital. At the end of a month he took his papers to London and there arranged them. He made a copy of sixty of the most perfect of them, of which thirty were favorable and thirty fatal in their termination. From these he made the deductions which they afforded; and this required an exact analysis of each case. To this analysis he added the few reflections, which he thought to be fully authorized by the facts, but restrained himself from engaging in any speculations on the subject. This was a restraint, to which at his age he would not have submitted, had he not been fully imbued with the rigid, philosophical principles of his master Louis. At the end of May and first of June he sent to me the papers thus prepared, in two parcels. Coming by private hands I did not get them all till the first of August. After obtaining the advice of a judicious friend I determined to publish them, for my son had left it to me to do so or not. I am willing now to refer to them in support of the praise, which I have ventured to give to my own son. The only object of the book was to throw light on the pathology, or strictly to give the natural history of the disease and to draw such inferences as the facts afforded. On the treatment he

would not venture to offer any thing, except indeed that the disease had not thus far been influenced by remedies. The book was published here, when the public had begun to be tired of reading the numerous pamphlets upon it, with which the press teemed for three months. On this account it did not attract so much attention as it would have done otherwise. Besides, it promised no aid as to the treatment, in which the public were naturally and properly most interested. But, for its purpose, I might beg that it should now be compared with any other work on the same subject, which has been published any where. This is strong language and I should not be thus bold perhaps, if I claimed for my son all the merit of the work. I did and do give to him great credit, but the materials were gathered under the guidance of, and in part directly from his masters at la Pitiè, to whom I have so often referred.

While he was engaged on this work in London he made some acquaintances there, and acquaintances of the most valuable character. Though he went from this country without letters to medical men in Paris, the friendship of distinguished physicians there had furnished him with a flattering introduction to medical men in London and Edinburgh. In London also he was received, almost at once, by my friend Dr. Boott, on whose character, and kindness to my son I shall refrain from making the remarks, which my heart dictates. Thus was my son enabled to gain access to whatever was valuable in that city both then and in his subsequent visit in the autumn.

But it was not only by an intercourse with professional men that he was benefited. Far greater was the advantage, which was afforded to his mind and his heart, from an introduction to a select circle by the gentleman whom I have just named. In France he had studied the external world only, under the best of masters indeed, and men whose whole conduct evinced the

excellence of their hearts as well as the depth of their science, and their holy devotion to truth. But in London he was refreshed by being brought into domestic society and among people of the greatest refinement, whose minds were engaged in the study and the elevation of the human character; — persons who were filled with philanthropy, and who took delight in fostering all the best propensities of his heart.* The hospitality of England delighted him; and for a time he became elevated almost beyond himself in the little paradise, in which he was placed. All his good and holy resolutions were strengthened, and he learnt to view his profession only as the means of being useful to his fellow-men.

The plan however, which he had laid out for himself, was to spend a few weeks during the summer in Edinburgh, to make a brief visit to Ireland, and to get back to London early in the autumn. Accordingly he tore himself from the delightful circle, in which it had been his privilege to be admitted as a friend, and made a circuitous journey to Edinburgh, visiting many interesting places on his way. I am tempted to give here some extracts from his letters at this period, to show, not only his readiness to avail himself of opportunities for information, but also the excellent spirit of those whom it was his happiness to meet. But enough will be found on this score in the letters which follow, under dates of June, July and August, 1832. The letter of June 30th especially, contains evidence of the substantial hospitality, not that of the table merely, which is shown by men of science in Great Britain.

In Edinburgh, as elsewhere, he was admitted to free intercourse by the most distinguished men, and had opened to him every source of information, of which he could avail himself in so short a visit. At Glasgow he stopped only to examine the

* See note B.

famous museum of Dr. William Hunter. He walked over the highlands with a friend and fellow-student from our own city; and read, with vastly increased delight, the Lady of the Lake on the borders of *the lake* itself.

The cholera was in Edinburgh while he was there, and the treatment by saline injections was at that moment under trial. He had spent half a day at London in conversation with Dr. Stevens on his peculiar opinions, physiological and pathological, those especially which had a bearing on the saline remedies; and he was much indebted to that gentleman for his polite attentions. On his journey through England he had an opportunity of learning something of the trial of these remedies. Although not sanguine in his expectations, he attended to the effects of the saline injections in Edinburgh with the most ardent desire that they might be found useful. But the result in his mind was the same, as I believe it has been in the minds of most of those, who made trial of this treatment of cholera in Europe and America. His letter of August 10th goes into some details on this subject, and in that and others there were many statements very interesting at the moment, but which I do not think worthy of publication at this time.

In his visit to Dublin he was confirmed in the high opinion which he had formed of the excellent spirit and high scientific attainments of its physicians. There has arisen in that city within the present century a number of talented and learned men, who have labored much to advance the science of medicine. Their labors have not been in vain, and their merit is acknowledged in all parts of the world; at least in all where the English language is spoken. My son derived great advantage from the museum of the College of Surgeons at Dublin, the value of which he thought greatly increased by a proper catalogue. He also praised very highly the excellent lying in hospital of that city.

Returning to London at the end of August, he first indulged in the luxury of visiting the friends, from whose society he had already derived so much pleasure and so much benefit; in which he found his feelings and affections constantly purified and elevated. He then looked around for the means of pursuing his professional studies. He was in truth too far advanced to find any adequate advantage in devoting his hours to regular courses of elementary lectures, even though from most distinguished men. Surgery he did not meddle with; and the mode of pursuing pathological researches in the London hospitals did not seem to him at all equal to those, which he had witnessed at la Pitiè. It happened that the arrangements for the winter would not permit him to hear the clinical lectures of those physicians, whom he would have been most pleased to attend. He found then those monuments of industry and science, the anatomical museums of London, to be the only objects, which in the actual state of his mind and at his stage of study, could repay him for delaying his return to Paris. He had before designed to revisit this city in the spring for a few weeks, after passing the winter in London. But he now decided that his winter could be spent most profitably in Paris. At once then he engaged in the study of the excellent museum of morbid anatomy at Guy's hospital, which owes its existence to Dr. Hodgkin. This most pure and philanthropic physician afforded him every possible assistance. My son examined each preparation carefully, inquiring minutely into the history of the subject from whom it was derived, and taking notes as he proceeded, especially in cases where the whole history could be obtained. This study occupied him a fortnight.

He next visited the museum of John Hunter, now belonging to the Royal College of Surgeons of London. Having learnt in the first year of his medical studies to venerate the name of

the great author of this stupendous work, he went to it with the highest anticipations. His delight in seeing it was even greater than he had expected, and he thought that he derived great advantage as well as pleasure from his visits to it. But he saw that the advantage might have been much greater under more favorable circumstances. His remarks on this subject, or some of them, are given in his letters of September, 1832. The want of a catalogue, a want which is about to be supplied, made it impossible for him to study the preparations in a useful manner, notwithstanding the excellence of their scientific arrangement.

I ought not perhaps to omit an acknowledgment of, what he felt very strongly, the pleasure and profit he derived from an intercourse, in which he was indulged, with some eminent medical men in London; and I cannot omit to say that Sir Astley Cooper, one of the teachers on whom I myself attended more than thirty years before, was among them. But my son was so short a time in London that he could not acquire a very accurate knowledge of individuals there; and I do not deem it proper to quote his transient remarks on them, although these remarks were, for the most part, both respectful and accompanied by strong expressions of gratitude.

On his return to Paris, about the 20th of October, my son engaged at once under the greatest advantages in his attendance at the Hospital la Pitiè. He was now well prepared for observation of the phenomena of disease in the living and the dead. In addition to what he had previously gained, he now had had the advantage of having learnt many of the views and opinions of the greatest living masters on the leading questions in pathology. He knew that his whole life, of such a length as he then had reason to anticipate, would be too short for the full solution of these questions, even to his own satisfaction.

He knew also the inestimable value of the opportunities afforded him in Paris for this purpose, such as he could not look for again; a value increased tenfold by the aid and guidance of his beloved and revered master. It was at this time that M. Louis almost adopted him as a son, admitting him to the most unreserved intercourse, and affording him every possible facility in the wards under his care. There James devoted himself entirely to careful observation and the collection of facts. Not to a selection of the facts, which favored particular doctrines; but really and truly to an exact inquisition into all the facts appertaining to the cases before him. These, as far as time would permit, were all carefully noted on the spot in his daily visits; and these visits were not limited to the regular hours of the physician. By the orders of M. Louis he was admitted at all hours, and permitted to pass most of his day in the collection of his cases. Fully aware how much is lost to us in hospitals, in comparison with private practice, from not being acquainted with the families and with the personal constitutions and morbid dispositions of the patients, he endeavored to get a compensation by the most exact inquiries on these points. From the patient, or his friends who visited him, he constantly sought an answer to the following and similar questions, viz: Where was the patient born and when? Was he nursed at the breast of his mother, or of a stranger? What have been his occupation and his habits of life? What have been his previous diseases? Do his parents live; if not, at what age did they die; to what diseases were they and their relatives subject; and of what diseases did they die? Were they affected by palsy, asthma, or any disease of the thorax? If so, what particular symptoms did they manifest? Has the patient any children? If so, do they live and with what diseases have they been affected?

The observations thus collected were all of them such as he could himself have employed usefully, in connexion with others of a similar kind, in seeking answers to many general questions. For instance, he noticed, and, so far as I know, he first noticed the frequency with which asthma and either apoplexy, or palsy occur in the same family. To ascertain the accuracy of this observation, he inquired of all those he examined, whether asthmatic or not, if these diseases of the nervous system had occurred in their families. But, valuable as the cases he collected would have been to himself, the larger part of them were not such as could repay a perusal by others. Those, in which the event was fatal, and where the details were full and precise, are the most instructive to others. It is from among those principally that the cases in this book have been selected. These are not sufficiently numerous to furnish positive answers to many interesting questions. They are to be regarded as contributions to medical science; and, when they shall be taken in connexion with many similar observations, the whole being carefully analysed, they will give results of permanent value. They are printed with this view; and a peculiar encouragement to expect benefit from them is derived from circumstances, which I shall proceed to mention.

In the year 1832 there was formed in Paris a Society entitled "The Society of Medical Observation." It had for its first President M. Louis, and for its Vice Presidents MM. Chomel and Andral. Its active members were young men, who were proud to call M. Louis their master. Their object was to accumulate observations, made with the accuracy which their President had inculcated both by precept and example,* and to draw from them the inferences, which a

* See note C.

careful comparison of them should permit. Of this society, originally very small, its members being from different countries, my son was a member at its formation. It was one of his first desires to contribute his proportion of materials to its stores; stores which must become ample if its plan is not abandoned, and which will be opened freely to all the world.

During his residence in Europe my son had a strong desire to visit Germany, fully aware of the means there to be found for increasing medical knowledge, as well as of the benefit of personal communication with those, whose lives have been devoted to science and whose minds are stored with it. Each has his own mode of viewing objects and of presenting them to the minds of others. From every one something is to be gained. But, on the other hand, if one is limited by time, his mind may suffer from the kind of dissipation which arises from visiting even rich mines of learning, into which he does not enter as a laborer. From considerations of this kind, very judiciously urged by M. Louis, my son resisted the temptation and gave himself up to observation of disease at la Pitiè, as has been stated. He had fixed on the end of June, 1833, as the period when he should relinquish this employment, which grew more interesting every day. When July arrived he scarcely knew how to tear himself away, though he felt at the same time an eager desire to revisit his own family. Especially the idea of leaving M. Louis forever was afflicting to him in the highest degree. Never was attachment more just on the part of a pupil to a master, and never could it have been warmer, or more sincere. M. Louis gave him some beautiful articles as testimonials of his affection, and the delight, with which he subsequently regarded them, frequently made his eyes swim with tears. I cannot resist the gratifica-

tion of inserting the note by which these articles were accompanied, as also my son's last letter to me from Paris.

Translation of a note from M. Louis to J. Jackson, Jr. on his leaving Paris, accompanied with a bronzed inkstand and two pieces of marble, of which one was surmounted by the famous dog of St. Bernard, bearing a child on its back; to which reference is made in the note.

"There is a satisfaction, though I confess it is accompanied by feelings which render it a very slight one, in leaving some token of remembrance with friends from whom we are about to part; yet a satisfaction it certainly is, and for that reason, my dear friend, I beg you to permit me to enjoy it. Your thoughts would very naturally dwell at times upon your good friends in Paris; but, for my part, I choose you should have something to recall them more particularly to your recollection. I must therefore beg you to accept this inkstand, which I hope you will keep upon your study table, and these two little pieces of marble, which will serve to keep in their places the leaves upon which you will be writing the results of your researches. From these researches let nothing divert you; be constant in your pursuit three or four years, and do not let the poor child whom the faithful dog is bearing to his home, speak too feelingly to your heart. Do not forget that you are to be one of the lawgivers in our art; and that, if it is our duty upon earth to use our faculties in the best possible manner and for the advantage of the greatest number, you owe yourself to observation. Your future fortune will be none the less, and the satisfaction you will derive from four years' labor will be incomparably greater. Be assured that my best wishes follow you wherever you go, that no one can more sincerely desire your happiness, that I fully appreciate the value of your

friendship and of your esteem, and that I should be most happy to be able to give you proofs of it. Farewell, my dear friend.

(Signed,) Louis."

July 10, 1833."

"Paris, July 13, 1833.

"My dear father, —

"In two hours I am out of Paris. I will not attempt to describe to you the agony it gives me to quit Louis. He is my second father, and God knows that is a name I of all men cannot use lightly. I may not persuade you to look upon him with my eyes exactly as a scientific man; but in your heart he must have the share of a brother; for he almost shares my affection with you. From one, upon whom I had no claims, but those which my life and mind and habits gave me, I have experienced a care, an affection which I never could dare expect from any but my dear father, and which I shall ever feel to be the most honorable and truly worthy prize of my life. To meet with satisfaction in the eyes of such a man, and to hold a place in his heart as I do, I allow I am proud of. But, my dear father, I cannot write; I am sitting here, expecting to see Louis for the last time in my life, and it is only upon the occasion of quitting yourself, whom I have ever felt to be a part of me, that I have suffered as I do at the present. The ties of relationship are strong, the strongest when that relationship is close and dependant; especially if it be mingled with the strongest and warmest sympathies. But one's mind's friends, the hearts that not nature, but our own characters have given us, the friend, who not father to our bodies, has yet been and is ever to be the source, fountain and direction of the dearest thoughts

of our minds, that friend and that relationship is also dear. It is that friendship I must now quit, probably forever; it is that relationship that in the person I must now break, though in the mind and in the heart it can never be broken. Till now, I knew not how I loved my French master. I know well I shall rarely be called to such trials; they can occur but few times in life. Thank God, that with me, grief is as short as it is poignant, and that in a few days nought will occupy my mind but the anticipation of the joys of home. Once more in the arms of my beloved family, and under the wing of my dear father, and I can imagine no higher joy."

In addition to the testimonials of M. Louis's affection above referred to, my son obtained shortly before he left Paris another memorial of him, which he valued as above all price. This was a picture, and an excellent likeness of his master, executed by Champmartin, which M. Louis very kindly consented to sit for. The emotions which my son experienced on the arrival of this picture, which was during his convalescence from his fever in December, 1833, were too strong and too deep to admit of description.

From his younger friends also, James could not part without the greatest sensibility; from those especially whose home was in Europe. To one of these, M. Maunoir, of Geneva, he felt the attachment of a brother. Some, or all of these friends, perhaps, were surprised not to hear more from him after his return to this country. I therefore avail myself of this opportunity to say to them that he survived his return to us scarcely seven months; that half of that time was passed in the chamber of sickness; that, in the residue, he could not find time to respond fully to the kind expressions of affection and most friendly

attentions on his return and during his first sickness, which were abundantly poured out upon him; while he had also professional objects constantly calling for his observation. The friends, to whom I allude, will well understand how much interested he was in the inquiry as to certain points in typhus fever in this country, in regard to tuberculous cases and many similar subjects, which had interested him and them in Paris.

Under any circumstances my son's gloomy feelings on leaving Paris would soon have subsided, although without any forgetfulness of what he had left behind. His natural cheerfulness was sufficient. But he had also the pleasures of home in view, and he had more immediately the joy of seeing his friends in London, and the prospect of crossing the Atlantic with a rare company of friends, as fellow-passengers. It may seem like romance to speak thus of his happiness in finding rare and excellent friends at every turn. Yet, if it were well to bring out the evidence, many who will read this would know that the language is quite as cool as the subject will permit.

I shall not however dwell on the high gratification he received during a few days passed in London and Liverpool, nor that which attended his voyage to this country. The ship which brought him arrived at New-York on the 23d of August, 1833, with a precious freight, which rejoiced many hearts beside those of my family. For my household how little then seemed there occasion to apprehend the sad sufferings, to which they were soon to be called. The dangers of the sea and the risks of a long absence were over, the fearful cholera had left my son untouched, and now we embraced him as if we had a security of the happiness he was so capable and so anxious to afford us. He could indulge his heart at this moment in expressing his love for his friends with an ardor, which the cold manners of our country scarcely per-

mit on ordinary occasions, and he was almost in a delirium of joy. But after an indulgence of this kind for two or three weeks, he felt that the serious business of life called him, and sought to renew his observations on disease.

The opportunities offered him for this purpose were ample, though not so great as those he had left in Paris. My connexion with the Massachusetts General Hospital afforded him every facility at that institution. Besides, here as every where, he met the kindest attentions, and he soon found that the most busy among the medical men of our city were ready to show him their important cases and to invite him to their post-mortem examinations. In this way his time was abundantly occupied; and in accepting the kind hospitalities of numerous friends it was more than occupied. He was constantly under too great a pressure and I was seeking how to prevent it. The temptations came day by day, and in so many instances were the results of the most friendly kindness, that to resist at once was impossible. Our autumnal fever was prevalent much more than usual, and with some uncommon severity. The opportunity to study this and to compare it with the fever of Paris, on which Louis had written so admirably, was one which he could not forego. And when he found that this disease exhibited in the living and in the dead the same characters, which his master had so accurately delineated, his ardor was increased more and more, and he put all his powers to their greatest trial. It is not surprising, in the retrospect, that he became affected with the prevailing disease. He was attacked just two months after his arrival in New York, and underwent this fever in a very severe form. Some of my sanguine brethren will ask why we did not crush the disease at once? It is in accordance with my experience certainly, that, in most instances, the

early use of active remedies, of which antimonials are the most important, will diminish the violence of this fever, and in many cases will arrest it. But in some instances a peculiarly irritable state of the alimentary canal will not permit the use of these remedies; or, evil only will follow their use. Such was my son's case; owing in part to a stomach naturally irritable, but in part also to an intestinal disease which he had suffered abroad. Notwithstanding some active treatment at the beginning the fever took its course, and during the second and third week its result was very uncertain. It then became more mild, yet for six weeks he was unable to assume the erect position. His convalescence was not rapid, but in three months from its commencement he seemed to be in perfect health, having then been three weeks riding and walking abroad. His convalescence was not destitute of pleasure to him; on the contrary he spoke of it as a happy period; he thought it good for him to have been sick, that he should better know how to minister to others, and that his own heart would be the better. His sensibility to the kindness of his friends and the pleasure he derived from them were also increased; and we all meanwhile promised ourselves thathis health would become more firm.

The time now arrived when he should apply for admission as a Doctor of Medicine in our University. If he had been at home he might have taken this step in August, 1831. He had now been five years and a half engaged in the study of medicine. It could not be a question whether he could pass the requisite examination. Yet he felt some anxiety, because he thought it would be shameful for him to be found deficient in any point. This examination was about the middle of Februray. He had seemed quite well at the end of January

and beginning of February. But he now appeared less firm, and had some recurrence of a diarrhœa, which had afflicted him in France. I attributed this to the momentary anxiety he felt as to the examination, and to the deeper anxiety as to the more weighty duties which were before him; as he was soon to enter on the responsible duties of his profession. The examination being passed and the degree conferred, I felt desirous that he should make his arrangements at once to engage in business, hoping that he would feel a tranquillity when this was done. But I was in an error as to the cause of his difficulty. It was a physical and not a moral one. He thought his diarrhœa was no more than he had often had before. But suddenly the disease grew worse, it assumed the character of severe dysentery and he was entirely prostrated at once. Under this disease he suffered much and struggled hard, retaining his firmness of mind and fully aware of the uncertainty of its issue. He was severely sick about three weeks, but after the first fortnight, I regarded him as safe. The dysenteric affection was clearly subsiding, and he recovered some appetite, though still very weak. Suddenly a change occurred, of which the cause was latent; the prostration was extreme; his mind gave way, and in less than two days and a half he ceased to breathe.* In his last hours, his mind, amidst many wandering thoughts, appeared to get momentary glimpses of his real situation. He did not seem to shrink from the view, but was unable to keep it before him from failure in his physical strength. In one of these moments he said very distinctly and solemnly, "God, pardon me." That he had sins which called for this petition at all times there is no doubt. That he was deeply sensible of his own frailties and imperfections I well knew, for no son was ever more frank than he was

* See note D.

in communications to a father. That the prayer from a heart like his, not now uttered for the first time, was freely granted, it was impossible for me to doubt. His own humble penitence was highly proper. But for me, there was no fear that he would find anything but bliss in the new state of existence, into which my mind seemed almost capable of following him; almost, of seeing his admission. It was for my own loss, for that of my household, I had to grieve. And that grief, sincere as it was, found solace from the first in the delightful recollections his life had left on my mind. These recollections have constantly hung about it, and how grateful they have been may be seen by what I have transcribed in the preceding pages.

As I have not very strictly followed the plan which I laid down, there remain to be traced more distinctly some of the features of my son's character. His cheerfulness and gaiety of heart have been before mentioned. The influence of these on the society around him was often recognised by his friends. It was heightened among those, who had become acquainted with his purity and the sincerity of his interest in others. He was described very appropriately by one, who knew him well and loved him much, as having a "morning freshness," which shed gladness where he went.* He never took the lead among his friends, and his influence was not manifest; of course, it was not offensive, nor annoying. It was nevertheless great and extensive, so that each one was surprised at last to find that there were so many besides himself whose happiness was promoted by him. The number of friends, by whom he was admitted to intimacy, was large. The reason was that he loved men for different good qualities, and showed his interest in those he loved. He did not shut his eyes to their faults; he examined them critically, but not for the purpose of reproach;

* See note E.

he regarded those faults as misfortunes, which he should assist his friends to overcome. I suspect that he often performed the hardest duty of friendship; he told their faults to many. If he had not done it gently and in love they would have been offended. They were not offended. His most intimate friend has told me that he exercised a salutary influence in certain cases, where friends of a sterner character were not listened to.

In the society of the young he would give himself up to sport, so that it might have been doubted whether he could think soberly; and from the warmth of his feelings it might have been argued that he could not exercise his judgment coolly. Yet he was exact and discriminating in the investigation of facts, which related to science, and rigid in his deductions from them. This union of coolness of the head with warmth of the heart is rare, and this partly explains the circumstance of his finding favor with persons of very different character.

There was something agreeable in his manners certainly, which recommended him to good men; for he quickly gained the favor of good men wherever he went. Though he had acquired sufficient polish of manner while abroad, there was not enough of it to be a peculiar recommendation. So far as his manners were agreeable then it was not from any polish; it was from their manifestation of the good feelings already described.

I cannot omit remarking here the sincere reverence for age, which he imbibed very early in life and always maintained; which, far from checking his intercourse with the aged, made him seek it, both that he might minister to their comfort and that he might gain by their wisdom.

The principle of gratitude was very strong in him. He did not easily forget the slightest favor, and his heart was burn-

ing with affection toward those, who had rendered him important services. He deemed no services so great as those, by which his heart was made better; and hence arose his strong feelings toward his English friends, among whom he was placed at a moment, when his heart was truly hungering for the things which could elevate and purify it.

What shall I say of his ambition? The word is an equivocal one. Or, perhaps, the question should be of what was he ambitious. I think his young friends and associates will agree that he was not anxious for honorary distinctions. He had not such a spirit of emulation as leads one to study hard, so that he may get the highest rank among his fellows. He could rejoice most sincerely in seeing his friends gain honors, while he remained unnoticed. Envy, I think, scarcely sprouted in his breast; I, who knew him well, could never see the slightest evidences of that baneful feeling. But he had the strongest ambition to be worthy the esteem and love of the wise and good. He rejoiced openly when he made any acquisition in knowledge; he thanked God reverently when he thought he had made any advance in virtue. But so far from wishing that others might be less that he might be great, he would labor to communicate to his fellows, in a mode not offensive to their self-love, every acquisition he had made. He even took pains to manage this in some cases, so as not to seem to be bestowing what he was very anxious to give. He made it his aim to go as far in the branch of his profession, to which he particularly devoted himself, as any other man; and he said to me, after his return from abroad, that he *had* at some periods indulged hopes of such honors as our profession could afford; but that he had then totally renounced all such hopes and wishes for that, which he deemed of much more importance, the being truly useful

to his fellow-men. As to wealth, he loved the good uses of it, but he indulged no anxiety for it; and he was not prone to such extravagance in his expenses, as made it necessary for him.

During his college life he had made some attainments in general literature; not such as to give him claims to any distinction on that score, yet enough to give him a taste for more. He hoped to have a period in which he could do more in this way. But, in the few years he devoted to professional studies, he did not feel at liberty to spare many hours to other subjects. To politics he gave very little attention, and this only to what he could learn in conversation. During moments of political excitement in France and England, in 1832 and 1833, he could not avoid taking some notice of passing events; and, like all young men of ardent tempers, he sided with those who thought more of the attainment of liberty, than of the security which it requires to render it a real blessing.

I may seem to have said enough of his industry in the earlier pages of this memoir, yet I must state some of the evidences that in Europe, when left to himself, it was even greater than when under my roof. While he was abroad, with three necessary exceptions, he wrote to me by every regular packet to New-York, from Havre or from Liverpool. The letters were not ordinarily short; some of the extracts which follow will prove that they were not always so. They were frequently four full sheets. These letters, with some to other persons, were so voluminous, that I have thought it right to enumerate them among the proofs of his industry. But they amount to nothing in comparison with the papers of other kinds, which occupied his pen while abroad. These were, 1st. his cases, taken at the bedside in brief notes, many of them in French, and which amount I believe to fifteen hundred pages

at least, and some of these were copied and stated in full in the French language; 2d. many notes from books and from conversation with distinguished persons, accompanied often by his own reflections, making not less than eight hundred pages in his common-place book; and 3d. the translation of a large portion of Andral's Clinique medicale.

During the same period he made himself familiar with the French medical literature of the present day, studying a large number of volumes with great care. It would thus seem that no small portion of his time must have been devoted to books and writing. He however attended lectures on different subjects, but particularly and carefully two long courses by M. Andral. Yet his attendance on hospitals would seem alone to have afforded him sufficient occupation; while, except his notes of cases, the occupations above-mentioned could not have been carried on except at his lodgings. The time spent by him in hospitals while in Paris, a period of eighteen months, was not less than five hours a day, and for many months it amounted to six and seven hours a day. This time too was not spent in a holiday service; a large part of it was occupied in examining cases for himself, strictly scrutinizing their history by the interrogation of patients and by examining for the physical signs of disease; and a portion of it almost every day in the autopsy room, where, on the cold and wet floors, he usually tested by his personal examination all the minute changes of structure to which disease had given rise, so as to have become perfectly familiar with the common changes of this sort, to which the human body is liable. In thus reviewing his labors it seems strange that he could find, as he did, any time for society, for exercise and for relaxation. I am almost tempted to blot out the lines I have written on this topic. My heart bleeds almost in thinking how arduous were

his labors and how much more my happiness might now be, had they been much less so. I believe the statement to be quite within the truth, and it makes a part of his history; but I cannot recommend to any young man to follow his example, to its full extent, in this respect.

In the enumeration of his labors, while abroad, I have omitted to notice that he had first to acquire the art of speaking the French language, which he could not do, when he first entered Paris, and for which he devoted two hours a day for some weeks, though he at once went into the hospitals and learned to talk among the sick; — that he gave a portion of time to the study of practical anatomy under a private teacher; that he attended to instruction on obstetrics, and connected himself with three private institutions at the same time, so as to increase his opportunities for practice in this branch; and that he devoted one whole month industriously in London to the copying and arranging his cases of cholera, which formed a book in octavo of two hundred pages; and lastly, that his whole summer in Great Britain was spent in travelling, conversing with medical men, not idle conversation, and in a critical study of their collections of preparations of comparative and morbid anatomy.

Of the professional acquirements, which were the fruits of his industry at home and abroad, I have perhaps said enough; but I am tempted to point out more particularly what those acquirements were; the more, as I think his attention was directed to the points which a medical student should principally regard.

Every thinking physician finds more and more, as he gains experience, that his greatest difficulty is in what we term the diagnosis and the prognosis. He wishes to ascertain by examining his patient precisely what is his present difficulty, and

what course his disease is likely to pursue. He wishes in short, to be acquainted with every thing, which goes into the natural history of diseases. For this purpose he finds the speculations of the closet as useless, as such speculations would be to a gardener, who should desire to know one plant from another and the manner of growth of each. Further, to understand the natural history of diseases, he must have a knowledge of what appertains to the living body in health; in other words, of physiology. Facts and facts only are useful to him. Close observation alone will serve his purpose. It is sometimes not until after the experience and disappointment of years, that the physician fully realizes all this; but if he is an honest and intelligent seeker for truth, he discovers it more or less clearly at last.

Impressed as I have long been with these principles, it will be supposed that I endeavored to fix them in my son's mind. He was willing to receive them and soon came under their full influence. But it was away from me that he learned how to apply them more rigorously and with the greatest benefit. This he did from M. Louis; who, I hesitate not to say, has been the most successful, as well as the most rigorous, in pursuing this mode of studying disease, of any physician in ancient or modern times.*

The result was, as respects my son, that he returned to this country already possessed of uncommon skill for his age, in the examination of cases of disease and in distinguishing in each case the actual morbid affection; and also well taught in the best mode of pursuing his investigations, so as to promote the cause of true science. In the examination of the thorax by percussion and auscultation he was peculiarly well versed, as

* See note F.

likewise with the diseases of this region of the body. He was also familiar with the various morbid changes, to which the several organs and textures are liable. When he went to France, I urged upon him the importance of getting a knowledge of the morbid changes, to which the various membranes, and particularly those of the alimentary canal, are subject. In no other place could this knowledge be obtained so perfectly. The occurrence of the cholera in that country furnished at once occasion and inducements to pursue these inquiries, as to the alimentary canal; and he did so with success. He did not overlook the morbid changes which occur in the brain, and in other parts. But he seemed early to fix upon the thorax as the subject of his particular study. He was led to this, perhaps, by my frequent remarks on the obscurity of the diseases of this great cavity in many instances, and on the large proportion of cases in which they were fatal.

He was not ignorant of the common methods of treating diseases both in this country and in Europe, though less informed as to the reputed virtues of some medicines than many others. But he considered therapeutics as a branch of medical science which he had yet to study. He was very sceptical as to the utility of many practices commonly adopted, believing that they rested on insufficient authority, and he wished to bring them to the test of experiment. He did not feel a reliance, in respect to the influence of medicine, on the experience of men, who could not tell what would be the result of a disease without the use of remedies. He was nevertheless ready to follow to a certain extent the course adopted by physicians of sound judgment, until he should have opportunities to decide by his own experience. For his scepticism there certainly is some ground in the actual state of our science; and, if either extreme must be chosen, I would advise a young physician to

adopt the *expectant* mode of treatment, recommended by some physicians of France, rather than to employ on every occasion the heroic remedies of some of our countrymen. The profuse use of these remedies, and the abundant use of even mild articles in endless combinations, too often witnessed among us, cannot be too openly, nor too loudly reprobated. These errors are disgraceful to our profession. But, if that were all, one might be silent. They cause needless and often great suffering to those, who are already afflicted enough.

At the suggestion and request of one of my most judicious brethren I shall add, that my son's influence on the profession here, in the short time he was with us, was of a very salutary description. This gentleman states that my son not only caused others, who had not yet read the works of M. Louis, to study them with care; but that he induced among the rising members of the profession in our own city the habits of thorough observation of the phenomena of disease in the living and in the dead, which he had learned from the same great pathologist. He also taught us much in respect to the physical signs of disease in the thorax, with which we were imperfectly acquainted before; at least I may say, this was true as to myself. Indeed I ought to say more; for he aided me very much in regard to the diagnosis of the more obscure diseases of that region, derived from the combination of the physical and rational signs. On emphysema of the lungs he threw, for me, quite a new light.

These good impressions will not be lost. Already we have with us one of his fellow-students under M. Louis, who is abundantly able and will not fail to keep them alive. And others are soon to follow, who will, I am sure, carry forward the good work with the same disinterested love for science.

I have mentioned the sensibility of my son to the kindness he had experienced from his friends during his fever. I cannot close this memoir without some notice of the extent of that kindness. It was in truth so great that I never stated to him the full amount of it; waiting till he should recover more strength and be better prepared to acknowledge it. While his life was thought to be in danger, not only friends and neighbors, but those who were personally strangers to me, manifested a great interest in his welfare and the utmost readiness to afford to him and to me any assistance in their power. Every aid was proffered from the most respectable sources; and my son had for his night-watchers, during all the critical period of his disease, the most busy and most experienced physicians of our city. So great indeed was the public sympathy on this occasion, that I could not consent to have it roused again in his last illness; and hence I represented his case to all, except my most intimate friends, in the brightest possible colors. I cannot omit to make this acknowledgment of favors, which I can never repay, though its statement involves so much of egotism.

I would say something of the religious principles of my son. He began early to look at religion with real solemnity, yet without fear. At the very outset he acquired a conviction of and a confidence in the unbounded goodness of his Maker. It is from the views adopted on this fundamental point, whence issues so much light, that the religious principles of most persons take their color. He could love and did love supremely the Father of all things. He loved with fear, a fear that he himself should do wrong; but he loved also with confidence. He listened with delight to those instructions from the pulpit, which called on him to think worthily of his own nature, that

he might act in accordance with it. The sublime character of our Saviour and of his teachings was regarded by his heart, as well as his mind, with the greatest possible respect. He viewed that character and those teachings as strong evidence of his mission from God. In regard to the external evidence he saw that it required long and careful study, which every man could not undergo. He was willing to believe that it was sufficient, on good authority, until he should be able to examine it for himself. He would not however profess to believe, as if he had already examined it. Meanwhile he entertained no fears of death; satisfied perfectly that that event would be decided by wisdom beyond his comprehension. Such, almost literally, were the sentiments, which he expressed to me, shortly before the first sickness, of which I have given an account.

With such characteristics as I have attributed to my son, he seemed calculated to be highly useful in the world. I never anticipated that he would have a commanding influence in society, but I did think that he would have an agreeable and useful influence. Why he should have been permitted to go so far, to give blossoms of so fair a promise and of so sweet a flavor, and just then be cut down, it is not for us to say. It is one of those events, which show us that we know very little of the designs of our own being, at least while we regard this world only. I do not consider it as singular, because to me it was so afflictive; because I was disappointed of the most cherished hopes, just when I was almost ready to think my life well spent in having learned how to educate one, who could be much more useful than I had ever been. I need not look far from home to find those, who suffered in like manner, almost at the same moment. The instance is not singular; and because it is not, we must infer that the end of our existence is not merely

to be useful in this world; and we must be comforted by the assurance that a good life, however short, is the great blessing which alone should satisfy all our desires, as respects our children. Almost unnatural, it may seem, at least against the ordinary course of nature, for a father thus to erect a monument for his son. But surely he should be solaced, if the life of his son has furnished at once the solid materials for its erection and flowers for its ornament.

NOTES TO THE MEMOIR.

Note A.—Page 24.

It is due perhaps to M. Louis to state why his urgent advice in respect to my son's course of life was not adopted by us. I will first mention that I left my son to decide for himself, only placing before him the objections which I saw to the plan proposed by his excellent and wise friend. This I communicated to him, while abroad, desiring only that he would not decide, until after his return. It was not long after his return that he decided, that he could not adopt M. Louis's plan in its full extent, but he determined to conform to it as far as he should find practicable, and I was very ready to aid him in so doing. He decided to engage in business, but to take no pains to be fully engaged in it, and thought that for several years he could be occupied principally in the course of observation, on which he had already entered.

But why could he not adopt the plan fully? Because in this country his course would have been so singular, as in a measure to separate him from other men. We are a business doing people. We are new. We have, as it were, but just landed on these uncultivated shores; there is a vast deal to be done; and he who will not be doing, must be set down as a drone. If he is a drone in appearance only and

not in fact, it will require a long time to prove it so, when his character has once been fixed in the public mind.

This view of the subject is too vague, at least for those, who belong to other and older countries. Let me then state the matter more definitely. Among us, where the hands are yet few in proportion to the work to be done, every young man engages as soon as he can in the business of life. The public estimation of his character is decided early in his life; earlier than in Europe. In our learned professions men certainly come forward too young in most instances. They do not ordinarily keep at work so long, nor do their work so well, as if they had made more thorough preparation for it. But, if an individual were to go very far in the other extreme, his reputation would be fixed, as one, who perhaps loved knowledge and knew how to acquire it; but who was not disposed to use it, and who perhaps did not know how to apply it. Most of our physicians go into business after three years of study; some, by visiting foreign schools, protract the period of study to five or six years. If now, after this longer period, one should at the present day, spend four or five years longer in the acquisition of professional knowledge, before he should begin to engage in professional business, and this in the society where he meant ultimately to be so engaged, he would be regarded as a singular being, governed by a peculiar taste; and it would probably be thought that he would never be fit for the active business of life. He might become a teacher and attract pupils, but he might find it difficult to get patients.

In Europe it would not be so; but at present my fears would be that such would be the result in this country. It should be added, that my son, like most other professional men among us, necessarily looked to his own labors for his support. I should with great pleasure have supported him,

while going through his four or five years of medical observations. But I could not give him the means of support for life, because I had not them to give. He must then, at the end of those years, have come forward as a candidate for practice, with young men who had started in life many years after him; while his former companions would be already immersed in business, and could hardly sympathize with him in any respect. He would be regarded as in a false position, because he was in a singular one; and because so regarded, he would be kept there. He would come forward with the habits and feelings of a student, while his early companions would have acquired the habits of men of business. In this way he would both fail to obtain a support for himself, and fail to be useful to others. He would have acquired the habit of dependence on others, instead of that habit of dependence on one's self for support, which in this country seems almost necessary for every man. Such at least were my fears.

It was from considerations of this sort that I hesitated to encourage the plan proposed by M. Louis to my son. He himself saw the subject in the same light, and, though with reluctance, relinquished the plan. Perhaps we were both too timid. I now advert to the subject to show, that we did not refuse to follow the advice of his excellent friend, without a consideration of it.

NOTE B.—PAGE 29.

I am not willing to mention the names of private individuals, to whom my son had the honor of being introduced; nor to adduce evidence of the claims to much more praise than I

have given, on the part of the select circle, among whom he was admitted as a friend in London. One circumstance only I shall state which may be regarded by many as such evidence, and I state this partly for the sake of a quotation from my son's letter of June 12th, which relates to this circle. It is that in this same circle the Rajah, Ram Mohun Roy, was in the habit of visiting familiarly and unceremoniously, like an old friend. My son speaks of his introduction to this most excellent Hindoo as among the benefits, which were conferred on him by one of his friends; and subsequently adds substantially as follows: "When I reflect upon the character and regard the lofty front and nobly intelligent and benevolent countenance, which, could it but be in the station, would almost exercise the influence of a moral sun, and read the works of Ram Mohun Roy, and then remember that I was born in an enlightened and he in an unenlightened country, I blush for my own imperfections and make resolutions for the future. A new feeling, a new passion has been awakened in me. * * * * It will be the object of my life, not singly, but much more than it would have been had I not seen this circle, to aid in the work to spread knowledge and happiness."

NOTE C.—PAGE 34.

P. Ch. A. Louis, physician of the Hospital de la Pitiè, is a man, whose labors and whose writings must become more and more known for ages. I should deem it service enough to my brethren in this country, if I could induce them, one and all, to read and to study the works of this great pathologist. M. Louis is the founder of the numerical system, as it has been denominated, in respect to the science of medicine. It

is the object of this note to state what that system is, and briefly to advert to the successful application of it by its founder.

How many will be ready to turn aside, when they hear of a new system. Has not system followed system, it will be asked, ever since the days of the four humors. Facts, it will be added, observations, exact observations are wanting, not systems, in order to carry forward the science of medicine. Be it so; it is the last point, on which I would disagree with my reader. If however that reader has not had much experience on the subject, he may not be aware of the difficulty of making good observations, as regards both pathology and therapeutics, and of the caution which is requisite in making deductions. These difficulties should not deter us from adopting the right course; they should only make us study to find out what this course is. M. Louis certainly will not direct us to turn from observation to speculation.

But to remove the objection, let me say at once that M. Louis has not brought forward a new system of medicine; he has only proposed and pursued a *new method* in prosecuting the study of medicine. This is nothing else than the method of induction, the method of Bacon, so much vaunted and yet so little regarded. But, if so, where is the novelty? If any one, after patiently studying and practising the method proposed by M. Louis, denies the novelty of it, I will not dispute with him a moment. Perhaps he will then agree with me that it is a novelty to pursue the method of Bacon thoroughly and truly in the study of medicine; though it is not new to talk of it and to laud it.

A little history of one part of M. Louis's life will throw some light on this subject. This gentleman went abroad, and I believe had some appointment in Russia, after he had gone

through the usual course of professional education. Returning to France at the age of thirty-two, he was about to engage in private practice. He was then led to examine anew the state of the science of medicine, and was dissatisfied with it. He now decided to abandon the thoughts of practice for a time, and to devote himself to observation; that is, to the study of disease as it actually presents itself. With this view he went into the hospital la Charitè in Paris, and followed the practice of M. Chomel, now a physician at the Hotel Dieu and Professor of Clinical medicine, and highly esteemed as an author. M. Louis passed nearly seven years in studying medicine in this way. The first part of this time he was learning how to make observations. When he thought he had attained this art, he threw away, as I have understood, the notes he had already collected, and began anew to accumulate exact observations of the phenomena presented by the sick and of those derived from an examination after death in the fatal cases. In this course of observations he did not make a selection of cases, but took them as they were presented, indiscriminately. He was not in a hurry to make deductions from his cases, satisfied that he was gathering the materials, from which truth must ultimately be elicited. He was only careful that his observations should be correct, and had not any general principles, or doctrines, for which he sought support, or confirmation.

To estimate the value of his observations, it is necessary to understand the plan, on which he collected them. First, then, he ascertained when the patient under his examination began to be diseased. Not satisfied with vague answers, he went back to the period, when the patient enjoyed his usual health; and he also endeavored to learn whether that usual health had been firm, or in any respect infirm. He noted also the age,

occupation, residence, and manner of living of the patient; likewise any accidents which had occurred, and which might have influenced the disease then affecting him. He ascertained also, as much as possible, the diseases which had occurred in the family of his patient. Secondly, he inquired into the present disease, ascertaining not only what symptoms had marked its commencement, but those which had been subsequently developed and the order of their occurrence; and recording those, which might not seem to be connected with the principal disease, as well as those which were so connected; also, measuring the degree or violence of each symptom, with as much accuracy as the case would admit. Thirdly, he noted the actual phenomena present at his examination, depending for this not only on the statement of the patient, but on his own senses, his eyes, his ears and his hands. Under this and the preceding head he was not satisfied with noting the functions, in which the patient complained of disorder, but examined carefully as to all the functions, recording their state as being healthy or otherwise, and even noticing the absence of symptoms, which might bear on the diagnosis. Thus all secondary diseases, and those, which accidentally co-existed with the principal malady, were brought under his view. Fourthly, he continued to watch his patient from day to day, carefully recording all the changes, which occurred in him till his restoration to health, or his decease. Fifthly, in the fatal cases he exercised the same scrupulous care in examining the dead, as he had in regard to the living subject. Prepared by a minute acquaintance with anatomy, and familiar with the changes wrought by disease, he looked not only at the parts where the principal disorder was manifested, but at all the organs. His notes did not state opinions, but facts. He recorded in regard to each part, which was not quite healthy in

its appearance, the changes in color, consistence, firmness, thickness, &c.; not contenting himself with saying that a part was inflamed, or was cancerous, or with the use of any general, but indefinite terms.

Without presuming that I have described in the most exact manner the course pursued by M. Louis, I have said enough to make his plan intelligible to men of sagacity. Others have taken down cases in like manner. In the first volume of the "Transactions of a Society for the improvement of Medical and Chirurgical knowledge," published 1793, there is a paper by Dr. George Fordyce, entitled, "an attempt to improve the evidence of medicine." In this paper Dr. Fordyce recommends the careful collection of cases, as the only foundation for the improvement which he wished to see. Dr. Fordyce goes into many details, and gives two cases in a tabular form by way of illustration, and states that he has many cases collected upon this plan. In his plan some matters are insisted upon more than by M. Louis perhaps; others less. But Dr. Fordyce does not insist upon the examination after death, a most important part of the plan adopted by M. Louis. If however the attempt proposed had been followed by vigorous efforts, most important benefits would have resulted from it. Many no doubt thought of doing it. I myself thought seriously of it more than thirty years ago, and had blanks printed for my cases according to the plan of Fordyce. But the difficulties attending the plan in private practice discouraged me too soon. So far as I have known, M. Louis is the only physician who has devoted himself for years together, at a mature age and after a sufficient education, to simple observation, without the distraction of medical practice, and without having any share in the treatment of the cases under his observation.

It was only when he had accumulated a great mass of cases, that M. Louis began to deduce from them any general principles. He then arranged the facts he had collected in a tabular form, so as to facilitate a comparison of them. How much labor this required will be in some measure conceived, when I state that, while going through one class of his observations, those, I believe, which relate to acute diseases, he retired to a distance from Paris and occupied ten months in making out his tables. This statement is, I believe, substantially, if not precisely correct.

Let the reader conceive of these tables drawn out with accuracy, having columns devoted, with proper discrimination, to each function and to its various derangements, as manifested during life, and to each organ and its lesions as ascertained after death; let him then go to these tables and inquire, under what circumstances certain signs of disease arise, and with what pathological changes in the dead body they are found to correspond; let him ask under what circumstances certain morbid changes of structure occur, and with what symptoms they are found to be connected; he may find the answers and he may obtain them numerically. That is, he may learn in how many cases out of a hundred of any particular disease he will find a certain derangement of a particular function, or a certain change in structure of a particular organ; and he may also learn how often the same things may be noticed in other diseases, with which that under consideration may be compared. For instance, does he ask how often does it happen that dysphagia occurs in typhus fever? M. Louis replies from his tables that in the fatal cases of typhus, which he had examined when his work on this subject was written, rather more than one in five had this symptom. Is it then asked whether this symptom was found to be

connected with any particular organic lesion, M. Louis says that in four out of five of these cases there were ulcers in the pharynx or œsophagus, or other change of structure in the organs concerned in deglutition. Thus it was shown, that it has been for want of examination that we have so often attributed this symptom to weakness. If the same questions are asked in respect to other acute diseases, the answer furnished by M. Louis is, that in the acute diseases, of which he had accurate notes, exclusive of typhus, severe dysphagia did not exist; and that ulcers were also wanting in the pharynx, &c.; though slight organic affections were found in a very small proportion of those cases.

Or, again, is it asked, how often the epiglottis, larynx and trachea are ulcerated in pulmonary consumption? M. Louis replies that the trachea exhibits ulcerations in nearly one third of the subjects of this disease; the larynx in a little more, and the epiglottis in a little less than a fifth of those subjects. Meanwhile, in other chronic diseases, M. Louis had found only one case, in which these parts were ulcerated, while the lungs were not tuberculous. The symptoms, by which the ulceration of the epiglottis was marked, were a fixed pain in the upper part of the thyroid cartilage, or just above it, and a difficulty of deglutition, such that the drinks are sometimes thrown out by the nose. The symptoms attending the other lesions are much less distinct, and the statement of them would lead to details not necessary in this place.

The instances here taken are the first which came to hand, on opening M. Louis's publications; but in like manner we may find an answer to most of the questions, which would arise in reference to the subjects discussed.

The experience of one man is necessarily limited, and more extensive researches may give results different from those at

which M. Louis has arrived. But I am disposed to think that the difference will not be material in many instances. His observations were made only in the hospitals of Paris. Other observations, made in different climates and among persons of different habits, will probably discover differences of some kind, and perhaps some which are material. But in most respects, since the works of M. Louis have been known to me, I have found his observations confirmed by my experience here; and indeed in many respects they accord with my own previous observations, being, however, more precise than mine had been.

But there are various points in pathology, on which M. Louis has taught us what we did not know before. For instance, he has given us certain signs, by which we may recognise pericarditis, in a large proportion of the cases in which it occurs. He has shown that tubercles are always found in the lungs, if they are found in any other part of the body; or that the exceptions are so rare as not to be practically important. He has shown that chronic peritonitis is found only in tuberculous subjects. Others had suspected that the fever, now commonly called typhus, was dependent on inflammation of the mucous membrane of the stomach and bowels; and it had been shown that in certain seasons the elliptical patches, called Peyer's glands, were the seat of inflammation, and commonly of ulceration, &c. M. Louis has shown that a morbid alteration of these glands is constant in typhus; constituting, as he terms it, the anatomical character of that disease. He has likewise pointed out the other anatomical changes, which belong to, and those which often attend the same disease; as well as some symptoms which had been overlooked, or not duly regarded by others. At present I can

say that his observations, in regard to typhus, have been confirmed by all that I have been able to learn respecting it in this country, since his observations have been known to me.

I am not, however, engaged in reviewing the works of M. Louis. I have not guarded myself in all points in stating his observations. I wish to induce others to read his books, and they will then see the prudent caution, with which he offers all general remarks, and the scrupulous care which he exercises in making his deductions. He studies nature with a full faith in the uniformity of her laws, and in the certainty that truth may be ascertained by diligent labor. It is truth only he loves; not anxious to build up a system, nor pretending to explain every thing, he says to his pupils, such and such have been my observations; you can observe as well as I, if you will study the art of observation, and if you will come to it with an honest mind, and be faithful in noting all which you discover, and not merely the things which are interesting at the moment, or those which support a favorite dogma; I state to you the laws of nature as they appear to me; if true, your observations will confirm them; if not true, they will refute them; I shall be content if only the truth be ascertained.

I wish to add that M. Louis has inspired a gallant band with his spirit. They have combined to form the Society of Medical Observation at Paris; M. Louis is their President and MM. Chomel and Andral are the Vice-Presidents. They meet to report their observations and to be corrected by each other and by their president, when their observations are inaccurate or deficient, or when their inferences are broader than their premises. The members are selected without reference to their country; they are from different nations; they are scattered, and will in succession be scattered over the world; and all, who carry with them the true spirit, must con-

tribute to the advancement of real science. Men who devote themselves thoroughly to labor, in whatever department, must be felt and known in society. Let the members of this society go on and throw the fruits of their labor into a common stock, and they must all of them be enriched, and all around them be enriched at the same time.

To the remarks, perhaps too desultory, which I have given in this article, I am desirous to add two more.

The two great works of M. Louis, which have yet been published, are that on phthisis and that on typhus. My first remark is, that the information given in these works is much less limited, than their titles would indicate. In the first, other chronic diseases are compared with phthisis in respect to its symptoms and to organic lesions; and thus it may be regarded as treating, to a certain extent, of chronic diseases, and embraces a vast deal of information in respect to them. In the second, acute diseases are compared with typhus, with the like advantages.

My second remark is, that the general results, to which M. Louis has attained by his mode of studying diseases, have been greater, that is, more numerous and more important, than might have been anticipated in so short a time. I think he could hardly have hoped for such abundant fruits of his labors, great as they were; diligently and faithfully as they were pursued. In this there is much encouragement. Already in his hands medicine, at least what regards the signs of diseases and the pathological states on which they depend, begins to assume the form of an exact science. In moulding his materials indeed, he has availed himself of the useful instructions which have been furnished by others, on whom he could depend. This is especially true in respect to the discoveries of the illustrious Laennec, to whose merits

he renders ample justice. His own merit however is peculiar. While all were ready to acknowledge, that it is only by a careful observation of nature we can ascertain her laws, he only has had the boldness and the vigor to undertake and carry through a series of full and exact observations, without prejudice, and with a determination to report his discoveries fairly and exactly, not magnifying, nor diminishing the evidence in any case to make it quadrate with principles previously imagined. My son bore this testimony of him, that he would not be tempted to entertain an hypothesis in any case, saying that it had almost uniformly happened that rigorous observation had refuted the hypotheses he had formed.

I venerate M. Louis greatly. As the heir of my son I love him most sincerely. But it is not with the vain hope, nor even with the desire to promote his fame by my feeble commendations, that I have written this note. I regard it as certain that his fame, and what he will regard much more, the truths which he has discovered, will be extended and will live for ages. My sole expectation is to lead some, who might otherwise be ignorant of them, among my brethren of the present day, to study works which I esteem as among the most valuable certainly, if not the most valuable, which any age has furnished us in regard to medicine. Unlike the systems, which are always spoken of in the history of medicine, as successively rising with splendor and falling into oblivion, the principles published by the founder of the numerical system are not an artificial network, where the cutting of one thread may cause the whole to drop away; these principles may be added to, they may be enlarged, limited and modified, and yet the system may be maintained; and it will still derive its support from the first labors devoted to its erection as much as from the last. If, for instance, M. Louis has observed a

certain symptom, such as the enlargement in the region of the spleen, to be present in forty-five out of fifty cases of typhus; the exceptions will be ten per cent. Should subsequent observers find, that in a hundred and fifty cases there have been twenty exceptions, it will then appear that these in the two hundred amount to twelve and a half per cent. As far as I know, there are very few of M. Louis's numerical inferences, which have hitherto required to be modified so much as in the instance here supposed, since the publication of his great works; although ten years have now elapsed since that on phthisis and six years since that on typhus was published; and although he himself has continued, during this period, to devote a great portion of his time to the collection of new observations. Were it otherwise, however, it would be glory enough for one man to have led the way into the true path, and to have inspired others with the courage to follow him. I repeat the idea; — it is the spirit of bold and hardy enterprise, which is the glory of M. Louis.

I must add a few remarks on another point. It is objected by some to the labors of M. Louis, and of others of the French pathologists, that they labor indeed with ardor on the subject of diagnosis, that they study with the zeal of entemologists to discriminate minute changes of structure in the various textures of the human body, but that they do nothing to advance the proper business of the physician, the art of healing. Their therapeutics are decried, as showing an ignorance of what has been thought certain in England and in this country; and they themselves are regarded even as indifferent to this branch of science. Can this objection need a reply? I have long been satisfied, for thirty years I have been satisfied, that the physicians of Paris were laying the firmest foundation for the science of therapeutics, by studying the natural history

of diseases; and by thus giving us rules for diagnosis and prognosis. The course they have pursued has not always been the most satisfactory, and one at least among them has gone over to the dogmatic philosophers, though he has tried to disguise his desertion of the true cause. But the course they have pursued has led honest spirits to be more and more exact in their observations, until now, when one has arisen, who has vigorously undertaken all the toils, to which the method previously adopted would rightly lead them. Let them proceed in the same spirit, aided, but without any spirit of rivalry, by the pathologists of other countries; let us all learn what may be looked for, when art does not interfere in the diseases of the human body; that is, let us study the rules of prognosis, which are only inferences from the natural history of diseases; then we shall be prepared to study therapeutics. Let M. Louis, or men like him, test the effect of remedies in the same spirit, with which he has pursued his pathological researches. Having determined the average duration, fatality, &c., of typhus, for example, by an observation of a sufficient number of cases through a series of years, such cases not having been actively treated, let him then employ in the same disease the different remedies which have been thought useful. One physician extols the advantages of bleeding; another commends antimonials employed on the first days of the disease, in emetic doses, and for a few days afterwards in doses just short of nauseating; another contends that cinchona is the best antidote to the deadly tendencies of this malady. Let each mode of treatment have its fair trial; and let the results be compared with each other, and with similar cases, treated at the same time upon the expectant method.

This is substantially the mode, in which questions in therapeutics are beginning to be treated in Paris. So, no doubt,

they have been treated elsewhere. But it is in proportion as we arrive at precision, in respect to the natural history of diseases, that this mode will be pursued with the greatest advantage. It is because we are approaching to that precision that I think it scarcely rash to predict, that in fifty years the art of healing will be grounded on many exact rules, which we and our predecessors have not known. These rules will not be brought forward as derived from grand principles of physiology, or pathology; they must be deduced from the aggregate of careful, faithful observations of individual facts, made by men of enlightened minds. A love of truth, an unflinching love of truth is the first requisite in those, who engage in this holy calling.

I shall conclude this note by expressing my regret, that the writings of M. Louis have not yet appeared in an English translation. I trust that this will not long continue to be the case. Dr. Gerhard, of Philadelphia, determined to translate the work on phthisis two years ago, while in Paris. He engaged my son to assist him, who commenced the work after his return, and found time to go through a hundred and fifty pages, in the intervals of other occupations, during the short period of health which he had. Dr. Gerhard has since finished the translation; but he informs me that, owing to the great depression in the book-trade for the last year, no bookseller has been willing to undertake the work. It shall not be the reproach of another year, if I can prevent it, that this work shall be kept from the hands of our profession in this country. And more; it must be followed by a translation of the work on typhus and of the volume of memoirs by the same author. If I am not greatly in error, it will hereafter be the subject of much wonder that these works have lain so long, comparatively disregarded by those who speak the Eng-

lish language. I am not ignorant that they have been praised in the British and American medical reviews. I have in another article referred to a review in the Edinburgh Medical and Surgical Journal of the work on typhus, in which that work is treated with great respect. I may be told, that the reviewer says that the facts observed in London and Edinburgh, are, some of them, in contradiction to the observations of M. Louis. On this assertion of the reviewer I must remark that it is made in general terms; but neither he, nor any other writer, whom I know, has brought forward any series of observations carefully made, which go in the least to controvert the statements of the great French pathologist.

NOTE D.—PAGE 42.

The following is a note of the autopsy in the case of James Jackson, Jr., furnished me by my friend Dr. Bigelow, under whose charge it was made.

Mucous coat of the rectum very dark and thickened; upper part more mottled; solitary glands slightly enlarged,—Colon eighteen inches from end of rectum exhibits small ulcers;—in the transverse colon the mucous coat is thickened and large patches of it apparently destroyed. Cœcum,—mucous coat thickened, injected and ulcerated;—contains dark, thick fluid, ropy mucus, and a little fœcal matter. Ileum contains the same dark fluid, its mucous coat but slightly changed; Peyer's glands uncommonly few and small, only one, near the cœcum, being of the usual size, and containing doubtful cicatrices. Jejunum natural,—stomach contains a pint of dark thin fluid;—its mucous coat uneven, perhaps by glandular enlargement. Spleen firm, natural. Liver natural. Gall bladder contains dark bile.

Thorax. Pleura mostly natural. Lower edge of left lung slightly adherent to diaphragm. Apex of right lung also adheres slightly to pleura, and contains about a dozen tubercles ; — air vessels visible to the naked eye in the lower part of this lung, with some interlobular emphysema. Pericardium has reddish patches and a slight effusion of coagulating lymph, one detached mass of which is equal to a small pea ; it also contains semi-opaque purulent fluid. Heart pale, softish.

Examined forty-eight hours post-mortem by Dr. McKean. Present Drs. Warren, Channing, Ware, Stevenson and Bigelow. — March 29th, 1834.

NOTE E.—PAGE 43.

The quotation, to which this note is appended, was from an obituary notice, published in the Boston Daily Advertiser and Patriot, of March 29th, 1835. It was understood to be written by a class-mate of my son's, one of his most intimate and dearest friends, and a man of whose friendship any one may be proud. My quotation from this article was made from memory, and was not literally correct, but I leave it as it is. On submitting the memoir in manuscript to the supervision of a friend, just when it was going to the press, he begged me to insert this article in a note. I wanted no persuasion to add a testimonial, and an offering of pure friendship, so grateful to my own feelings.

FROM THE DAILY ADVERTISER AND PATRIOT.

Died, in this city, on Thursday, Dr. JAMES JACKSON, Jr., aged 24.

There are circumstances which give this event prominence, even among the severest afflictions with which it is the plan

of God's Providence to try us in the world. A few months ago Dr. Jackson returned from Europe, where he had been engaged more than two years in the diligent study of his profession. The praise of his uncommon attainments, and his ardent devotion to medical science, had already reached us from across the sea. He was welcomed home by the wide circle of his kindred and friends, whose warmest expectations he satisfied. There was nothing in him which they wished to alter; and they had everything to anticipate from his success in that benevolent province of duty, to which from childhood he had wished to dedicate his life, and to which he now brought with him such rich accomplishments and resources.

He had scarcely ceased receiving congratulations on his return to his native land, or had time to take the steps preparatory to commencing practice as a physician, before he was called off from his pursuits, and laid prostrate by disease. The hearts of those, in whom he had excited just pride and eager hope, were now agitated with all the alternations of feeling, with which we wait the issue of a malignant and insidious disorder. At length they were relieved from the load of fear, by his apparently complete restoration to health. He came back to us as one recalled from the gates of the grave, and we felt grateful that our prayers in his behalf had been answered. We little thought for how short a space he was spared to us; how soon the treasure, we had taken anew into our keeping, was to be required at our hands.

He applied himself after his recovery, with unabated earnestness, to the science and art to which his whole soul was wedded; and it did not fail to strike some of us, who visited him during his convalescence, with astonishment, to see how quickly and tenaciously his mind resumed its grasp of its darling subject. The degree of Doctor of Medicine was con-

ferred on him in the month of February, and it was but a day or two after he had publicly entered on the practice of his profession, that he was seized with the disorder which proved rapidly fatal to him.

In the death of this young man, a thousand expectations are shattered. We have no right to use the language of a private and exclusive sorrow. He belonged to the public, to whom he had already given pledges of rare eminence in his profession; and to the troops of friends whom he had bound to him by the charm of his pure and enthusiastic character. Indeed, he was so well known to this community, where he had a sort of hereditary claim to men's affections, that we feel restrained from any attempt to draw the character of our friend. He does not need our inadequate eulogy. Short as was his life, it has left imprinted on our memories, with perfect distinctness, the beautiful traits of mind and temper, which made him the favorite of all who saw him. To his near and intimate acquaintance, his death seems like withdrawing part of the general light which fell on their daily walk. For, not only was he one among those whom they chiefly loved and trusted; the ornament of their social circle; one whose idea never came to them, but they felt more respect for themselves that they enjoyed his confidence; — but he had in him so large a soul; a spirit of such morning freshness; an interest so unexhausted in whatsoever was good and true, in manners, opinions, persons, that, in losing him, our whole connexion with society, our whole delight in living, seems to be loosened and impaired.

We hardly dare intrude, even in our thoughts, on the sacredness of the bereaved home. What sorrow is like their sorrow, who mourn the separation from such a son, and such a brother?

" Where is Timarchus gone ?
His father's arms were round him,
And when he breathed his life away,
The joy of Youth had crowned him.
Old man, thou wilt not forget
Thy lost one, when thine eye
Gazes on the glowing cheek
Of Hope and Piety."

Thus early has the shadow of the dark valley settled down over the human prospects of him, who seemed to be the child of a prosperous fortune. Thus hastily has he gone away to converse with what is spiritual and eternal. It is well with *him*. But *we* who had promised ourselves many years to rejoice in his friendship, and to witness the harvest of true honor he should reap in the large field of his usefulness, *we*, who stand sadly looking into his sepulchre, what is to console and cheer us? God forbid we should distrust His infinite love! No: we lay in the earth the dust of our friend, full of gratitude for all that he was in himself, and for all the happiness and virtue to which he ministered, like a good angel, in others. He has gone while the dew of his youth was on him; we shall no more see his face, nor hear the sincere eloquence of his voice. But the beauty of his life, and the sweetness of his memory are ours. And ours too is the faith in the immortality of the soul; the assurance that the parting is not forever; that we shall again greet our brother in the blessed employments and inseparable union of Heaven.

NOTE F. — PAGE 49.

In this work I have endeavored to avoid introducing myself, except where it was inevitable from my connexion

with its object. But I wish in this note to deviate from my course, so far as to explain my own tardiness in acquiring a knowledge of M. Louis's writings. Among those who know me it may be asked, why I did not earlier become acquainted with these writings, and commend them as I have done the last two winters in my lectures. And it may now be supposed that the personal favors bestowed on my son by M. Louis have biassed my judgment. Greatly as I value those favors, I am not willing that it should be believed, that my opinions on matters of science could be influenced by them. The holy cause of scientific truth rejects all aid from even the best emotions of the heart, as much as from considerations of policy and expediency.

My first knowledge of M. Louis's writings was from the review of his work on typhus in the Edinburgh Medical and Surgical Journal, in 1830.

I was much impressed with the statements there made; but I felt of course great hesitation in believing, in regard to a stranger, that his labors and his success had both been so extraordinary as they were there represented. Much depends in such a case on the character of the man, and it should be noted that the review could not, like the works themselves, present internal evidence of the author's devotion to truth. I made a note of the titles of M. Louis's works, determining to send for them. It happened by a succession of little accidents, that I did not act under this determination the ensuing season; and though the matter was not forgotten by me, the impression made on my mind by the review became less lively, and at last I decided to leave these and other French works till my son should go to Paris. Little could I then anticipate that M. Louis, or any other distinguished man in Paris, could form so intimate a connexion with that son as actually took

place. Notwithstanding what James wrote me on the subject, until his return home, I had not read any of Louis's works. One of them had been in my possession for two or three months, but circumstances prevented me from doing more than to look into its first pages. The discoveries made by Louis in respect to typhus were in contradiction to opinions, which I had maintained and taught for many years. But, within six weeks after my son's return, the evidence derived from post-mortem examinations in our hospital, and in private practice, went very strongly in support of the observations made by M. Louis in Paris. Then I was no longer willing to hear of that gentleman's works only from the lips of my son; I took hold of them immediately and derived from the perusal of them the greatest satisfaction. Finding the facts stated in them to be confirmed by my recollections of the past in many instances, and by my subsequent observations in others, and that the whole results were of the valuable character, which I have endeavored to describe in another article, I have been led to urge upon my pupils the study of those works with all the earnestness, which I wish always to feel in aiding their progress in the search for sound knowledge. If it be discreditable, I must submit to the disreputation of yielding old opinions to new evidence; though I might show that M. Louis's accurate observations and nice analysis have confirmed my previous opinions in ten instances to one, in which they have reversed them. But the purpose of this note will be answered, if it serves to show, that my efforts to induce my pupils to attend to the instructions of the founder of the numerical system, have been grounded on deliberate conviction and not on personal feelings.

EXTRACTS

FROM LETTERS FROM

JAMES JACKSON, JR.

TO HIS

FATHER.

EXTRACTS FROM LETTERS.

It will readily be understood that in letters written in such entire confidence, as the following manifestly were, there must have been many things improper for the public eye, and many of temporary and personal interest only. Hence, there is scarcely one entire letter in the following collection; and hence, I have omitted to print many, which might be interesting to some minds. Wherever individuals are mentioned, unless such as may be called public men, I have suppressed the passages; and, from the connexion, the whole letters have in some instances been suppressed. This has not been because such individuals have not been mentioned favorably; on the contrary, in most cases I remarked that my son avoided speaking of those, whom he could not praise, unless from peculiar and rare circumstances.

It may be thought more necessary, perhaps, for me to apologise for printing so many, than for not printing more of these letters. I can only say that I have admitted none, which I did not believe would interest some of my son's friends. It cannot be supposed that each one of them will be interested in all the letters.

The ardor, the impetuosity and the freshness of youth, will be sufficiently obvious to the cool and dispassionate, in these letters. They were written by a young man, principally in his twenty-second and twenty-third year. It will not, I think, be by persons of experience and reflection, that these qualities will be regarded with the least charity; or, if by any such, they will be those who are not fathers. If I am wrong on this point, I fear not but that I shall be readily excused.

I wish to add that these letters are published as they were written, obviously not for the press; with the exception of the few verbal corrections, which such compositions must always require. I have avoided these even, when not absolutely necessary.

PARIS, OCTOBER 28, 1831.

MY DEAR FATHER, —

I feel almost disposed to cover a sheet or two in enumerating the difficulties of auscultation. If Laennec has added an important aid to our insufficient means of exploring diseases of the chest, he has, at the same time, rendered the study of those diseases more difficult, more laborious I would say, to the learner. Perhaps we may better say, in other words, that this great observer has so far extended our knowledge upon this subject, by his accurate distinctions, that the labor, requisite to obtain all that is known, is much greater than it has hitherto been. I have just returned from the Hôpital des Enfans, where I have been experiencing the difficulties and the uncertainties of auscultation. I have been employed for nearly an hour in examining two children, in both of whom there is some reason to suspect the existence of tubercles. In both, the chest resounds well on percussion on each side; in

both, there is one side where the respiration is natural, strong, *vesicular;* in both, upon the other side, is an absence, or at least a great deficiency of the vesicular respiration; while, together with a mucous and perhaps a crepitous râle in some points, there is also what seemed to me and my friend, the *interne*, the bronchial respiration. But if this last supposition be true, the diseased lung must be in each case, in a great measure, either hepatized, or very full of tubercles. If this were the case, we should certainly expect to find a great difference in the sound of the two sides by percussion, whereas the difference, if there be any, is very slight. I have not mentioned all the circumstances of these cases; I shall keep notes of them after future examinations, and should I ever know their end, you shall hear of it. You see there is no doubt which is the diseased side in either case; the difficulty is to pronounce upon the exact seat and nature of the disease. By the by, one of the cases is complicated with a contraction of the side to a very considerable degree, though the child dates his disease to six weeks only, has not had the ordinary symptoms of pleurisy, and says he has been well from his infancy. This last, I should doubt. I have mentioned these cases in order to introduce the subject of bronchial respiration. I was not at all aware, or rather I was not fully aware, of the very important distinction between this and vesicular respiration, before I left home. I knew the distinction from description; I had once, or twice recognised it; I knew generally what was indicated by it; but I was not by any means aware in how many cases it was to be heard, and under what circumstances it was to be sought. It has been pointed out to me here much oftener than I expected. First, I heard it last summer in several cases in Andral's ward, during the second stage of pneumonia; and from him I learned to distinguish it

from vesicular respiration. I remember well one case, in which he said you will hear upon the right side the bronchial respiration at the same time with the vesicular, and on the other the bronchial alone. I listened, and could make this distinction; was confident of it. The difference consisted in a slow expansion of the vesicles by the air in the one, and an absence of this in the other. From that moment I thought myself master of it. Unhappily, I was deceived; and I have often had melancholy occasion to find that my knowledge is not yet perfect on this point. I have since had frequent occasion to hear this bronchial respiration, and to distinguish it with great confidence from the vesicular. At this moment there are two patients in Louis's ward at la Pitiè, where I feel confident of making the full distinction. There is also a child at the Hôpital des Enfans, in whom the difference between the two, in the whole extent of each chest, is most decided. Another has just left, in whom I thought the distinction also sure; but, unhappily, besides these there are other cases, like the two which I have related, which are very doubtful. Next to the bed in which is placed the child, where the distinction is so marked, lies another, in whom I feel almost sure of a bronchial respiration on one side, and yet I am distrustful of myself. Let me remark, *en passant*, one important point of difference between the two cases; the first is chronic, breathes slowly in comparison, although the whole right lung is *hors de combat*; while the other is acute, its respiration is immensely rapid, seventy while awake and ninety while asleep. This rapid respiration greatly increases the difficulty of auscultation, especially on this one point, with children; because, where the respiration is thus rapid, the air hardly reaches the vesicles, or rather their expansion is so momentaneous, as hardly to be distinguishable from the sound of the air passing through

the bronchia ; so that the respiration in the healthy lung comes greatly to resemble that in the hepatized. I speak on this subject, because it is one which has interested me much. Andral in his lecture-room and by his book, has turned my attention very strongly to it. As I tell you, I have occasionally found very great satisfaction from it; at other times, I have been almost in despair; but I say to myself daily, "listen for that slow, full expansion of the vesicles, which ought to exist in a sound lung, and strive to distinguish it from the mere passage of the air into the bronchia." I am convinced that this is one of the most important distinctions that can be made by the stethoscope.

The knowledge to be gained by the auscultation of infants is much greater than I had supposed. There are certain points of great difficulty, like that I have mentioned ; but as to others, on the contrary, there is a great facility. The crepitous râle, I think, is more easily distinguishable in them, than in adults ; they are examined with greater ease and more profit upon the dorsal region ; and the immediate is much more easily practised, than the mediate auscultation with them. For my part, I can never henceforth examine a child under disease without bringing to my aid this means. By the by, you would be much surprised, my dear father, to see how much more the immediate auscultation is used here, than the mediate. There is one other point, we are too apt to neglect at the Massachusetts General Hospital ; it is the examination of the dorsal region. The French examine the back more than the front ; we do the contrary ; both err, but they the least.

Paris, November 6, 1831.

I still follow Louis, and still find the visit an instructive one. We have a great proportion of uninteresting cases, it is true; but we have likewise a fair share of the rare and interesting. One of our greatest benefits is derived from the examination of new cases. He always proceeds by the method of exclusion in his diagnosis; suggesting all possible causes of the symptoms, after having elicited these in a masterly manner; stating the objections to all objectionable suppositions; and at last arriving, when it is possible, at a satisfactory decision. This mode of examination is exceedingly useful to the student. It habituates his mind to the consideration of the individual symptoms belonging to each disease; it teaches him what affections are liable to be confounded with each other, and by what means he is to distinguish them.

We have a case of pleurisy, which has been very interesting and instructive; — but here again I have been instructed by committing an error, which, I am very happy to have been convinced is an error, by the change of circumstances in the case. You remember that Laennec says ægophony often resembles pectoriloquy so much, as often to be taken for it, et vice versâ. Louis had pronounced this case to be pleurisy, saying that there was an effusion into the left pleura. Several of us, students, on examining this side about the scapula, became assured that there was a pectoriloquy at this part, and did not hesitate to declare to each other that we distrusted the diagnosis of our master. But the gradual absorption of the water has proved him to be right, and taught us to be cautious in future to distinguish ægophony from pectoriloquy. The case has been very interesting in other respects. During the time of the pressure of the lung by the fluid in the pleura,

there was a very distinct bronchial râle, contrasting finely with the vesicular expansion of the opposite side; and at the latter part of the disease a very fine ægophony toward the base of the lung; as also a peculiar *craquement*, similar to a crepitous râle somewhat, which Louis attributed to the rubbing of the false membranes together after the fluid was absorbed. I shall never forget the case, and am very glad I made the mistake; — it reminded me of a very important fact in the science of auscultation. We have also a case of pericarditis of great interest. Woman, aged forty, had not menstruated for four months, and thought herself pregnant. Fifteen days since, very copious flow of menses commenced, lasting eight days, accompanied with violent palpitations of heart, and difficulty of breathing, especially on motion; — at first syncope; no febrile affection for few first days, no cough, no pain in chest; for last few days some febrile action. Now, great palpitation, dyspnœa, almost orthopnœa, cannot assume horizontal posture; no cough nor pain; but in space of size of a man's hand over præcordial and epigastric regions, she says the part "seems dead;" — no sensibility there except to the most severe pinching, and this hardly perceptible to patient; pulse regular, no great febrile affection; — by percussion, flat sound over region of heart, *much more extensive* than natural; — no other local symptom. Diagnosis; pericarditis advanced to effusion. Prognosis, almost certain cure. The diagnosis did not surprise me; — I had come to the same opinion. The want of sensibility in this circumscribed region is a very extraordinary circumstance. By the prognosis I was a little surprised and perhaps looked a little incredulous; — but Louis went on to state that, at the least favorable estimate, the cases of recovery were five out of six; and that, of seven or eight which he had treated at la Pitiè, he had not lost one.

The chance, he considered about as good as in pleurisy. But these remarks applied only to cases which were *not complicated with any other disease*. He added, that the circumstance of our meeting so often with adhesions of the pericardium, in subjects dead from some other cause, proves that these individuals had survived a pericarditis, and thus confirms his view as to the prognosis.

*The woman is now much better, — the dulness on percussion has almost disappeared; the sensibility has returned in that spot; less dyspnœa, etc.

PARIS, NOVEMBER 28, 1831.

I am still following at la Pitiè. I have made two, or three efforts to follow Chomel at Hotel Dieu; — but it is impossible to do so with advantage. One may hear the clinique to be sure, and a very good one too; but he cannot see the patients. This, especially in my present situation, is the most important by far. My great object is to accustom my ear to stethoscopic sounds; in order to this I must see the patients. The visit at Hotel Dieu is commenced an hour and a half before clear daylight, by candle-light, indeed; — there are from two to three hundred pupils in the wards at the same time, and one is fortunate if he sees four patients, and examines one in the course of the visit. Whereas, the visit is made at la Pitiè by daylight, there are not more than fifteen students, and I call it a black day, in which I have not examined as many as six patients at least, who present stethoscopic phenomena; — ordinarily I examine as many as ten. Besides, as I have

* This was a marginal note on the letter, added at a later day evidently, but not dated.

told you before, Louis gives a little clinique at each bed. You see that I do right in giving the preference to la Pitiè. I think I am becoming daily more able to distinguish the signs which indicate commencing phthisis. They are not one but many.

I find that both Louis and Andral depend more upon the respiration, its force, or its modification, the râles, craquement, gargouillement, and the sound when the patient coughs, than upon the voice. This craquement, or, when more marked, gargouillement is, with them, a very important sign. When slight, it indicates the commencing ramollissement. Frequently it is not heard during the common respiration, but only when the patient takes a full inspiration, or coughs. This, if attended with obscurity, or feebleness in the respiratory murmur, is very decisive. Andral says, in as many words, in an article on auscultation, which he has lately written in the new Dictionary of Medicine, that he depends much more upon the respiration, the râles, and the sound of the cough, as affording evidence of tubercles, than upon the voice. In this same article he makes some very important and very interesting distinctions, especially on the subject of bronchial respiration. I think he has facilitated for me the study of auscultation with children, particularly by his description of one variety of bronchial respiration. I fancy that one or two of those mistakes in diagnosis, of which I lately wrote you, were owing to a want of attention on my part to this distinction. If so, I may hope to profit by them. Since reading the article I have not yet had an opportunity to settle this important question.

PARIS, DECEMBER 1, 1831.

I have to-day seen three very interesting cases of pleurisy.

1. A woman, sick fifteen days; chills; no heat; no pain, unless a little on coughing low on right side; no loss of appetite; at present pulse very little excited; slight cough; no other complaint; no apparent dyspnœa. The case seemed very slight, and as the French say "pas beaucoup de choses," until Louis, with his almost magic hand, percussed the chest. It was then evident that the lower half of the left chest was perfectly flat, before and behind; — respiration there, while sitting, inaudible; ægophony, not very pronounced, behind. Here then was a case of complete latent pleurisy, which had gone on to considerable effusion, without pain, or dyspnœa, or any great constitutional disturbance. But, is this new; — have I never seen latent pleurisy before? Surely it is not new, yet it is interesting. Surely I have seen such cases before; — but I have never (or rarely, for I remember one, an old man in our fever ward, in whom I discovered ægophony, when there was no reason to suspect an affection of the pleura) seen a case, on which light was so quickly and completely thrown by the use of percussion and auscultation.

But further; I made this woman lay upon her belly and I could then perceive the respiratory murmur slightly upon the back, which was entirely inaudible while she was in the sitting posture. This is important, as distinguishing a pleuritic effusion from hepatization of the lungs.

2. A woman lies upon the opposite side of the same ward, who has had an acute pleurisy, for four or five days; great pain and dyspnœa; — the side still sounds well on percussion; therefore, as yet no effusion. Yesterday, about half an hour before the visit, I examined this patient and heard the respiration plainly upon both sides of the chest. Louis, an hour af-

terwards, could hear no respiration upon the affected side. I mentioned to him that it was very clear there an hour before. He said it was highly possible; for no effusion existed; that it was the pain only that prevented the full expansion of the lung, and as the pain varied, this must vary. This morning the disease still continued, but the respiration at the time of Louis's examination happened to be fully audible. This case is valuable in two points of view. First, in its contrast with the one just related; — great pain and dyspnœa in the one, absence of both in the other; — total want of effusion, unless it be of mere lymph, in the one, and very great effusion in the other, so as to enlarge the side even. In the one, nothing but negative and uncertain evidence derived from auscultation and percussion; in the other perfect and entire evidence, by these means, of a disease which would have been unknown without them.

Second, it is useful as showing that the respiration may be obstructed over a great portion of a whole lung, without any mechanical cause; — that we must not decide in such a case without comparing the results of percussion with those of auscultation; — that we must not be satisfied with a single auscultation, but repeat our observations in every case, in which absence of sound is not accompanied by dulness on percussion. A want of attention to these two last points would have led to a false diagnosis in the present case. Louis regards this last case as rare. He says pleurisy occurs more often without pain than with it. Is he not supported by the records of morbid anatomy? He would say yes; and by his own diagnosis too; — and by his wonderful ability at percussion, he can distinguish many a case, which would escape almost any other man. To practice percussion well is no easy thing, and no ordinary accomplishment. How often do men, or women pay five hundred

dollars to learn to touch the piano; I would willingly give five hundred to any one who would teach me to percuss like Louis.

3. My next case of pleurisy is at the Enfans Malades. I will spare you a detailed history, — sick a week; pleuritic pain in left side; — respiration very rapid; — great dyspnœa; — constitution much and actively affected; — no cough till night before last. When I first saw him, four days since, it was as pure a case of simple pleurisy as I ever saw; — he began to cough, night before last; — I thought to-day the lung might be affected; — still no expectoration. I observed to-day the following physical signs, to which I am desirous to draw your attention, because they are each and all interesting. 1. Flat, left side behind, — perhaps also, but less certainly, in front. 2. Want of vesicular respiration front and back on left thorax; behind, respiration bronchial; ægophony; certainly alteration of voice. 3. Puerile respiration, whole extent of right side and full sound on percussion. 4. When the boy laid on his belly crepitous râle very distinct, behind, on left side. I forgot to examine him by percussion in this posture. 5. Pressing up of the diaphragm on the right side greatly increased the dyspnœa; — the same pressure of the left produced no such effect. 6. Natural vibration on speaking, perceived by application of hand to right thorax; — entirely imperceptible on left. Diagnosis; pleuritic effusion; pneumonia to first degree on posterior part of left lung. This is only my own examination. I was alone. It is to be trusted by no one but myself; — but to myself, as I must have a certain degree of confidence in it, it is very interesting.

You will observe that in this case and the first, I have examined the patients while lying on their bellies. This is a mode advised by M. Reynard to determine whether the effusion be simple, or accompanied with pneumonia. You see that

in No. 1, I heard a slight, but natural respiration, while the patient was in this position; whereas in No. 3, I found a crepitous râle; leading to the conclusion that in the first the lung was not affected; in the third it was inflamed. Again, the want of vibration on the affected side, is a mode of distinction, pointed out by Reynard and approved by Andral, between a pleuritic effusion and hepatization. I ought not to have omitted to mention that, in two of these three patients, (and I am not sure with regard to the other on this point), percussion upon the diseased side was painful. Are not these cases replete with interest? Will you not forgive your pupil for daring to write his master such a letter? It is only from the fullness of the heart, that the mouth speaketh. But good by, my dear father, for the present. I am daily, hourly expecting to hear from you; it is fifteen or sixteen days since I have had any letters. I hope for a clinique; — but as far as I see, you get more cliniques than I, from our correspondence. Unfortunately such is the fashion at the present day. Our talkers and writers are those who want experience, the unlearned; whereas, those who are able to speak wisely, are silent.

PARIS, DECEMBER 14, 1831.

I have been lately much interested in diseases of the brain. Cruveilhier excited me upon the subject. I have since read an excellent work by Rostan, on the ramollissement of the brain; and am now reading, with very great pleasure, a most learned and talented work by Lallemand of Montpellier, upon diseases of the same organ. This last is truly a master-work. The author differs from Rostan as to ramollissement. I have read the arguments of both and am inclined to agree with Rostan.

I find that Andral, in his Anatomical Pathology, does the same. There is still another standard author upon diseases of the brain, — Bouillaud, whom I intend to read next. That, with Andral's promised volume upon the brain, which will probably appear shortly, and which I look for impatiently, will give me a pretty good knowledge of what the French have learned upon the subject. But, happily, I am not left solely to books. We have now some very interesting cases of cerebral disease in Louis's wards; — one has particularly engaged my attention within a day or two.

A young man, headache for some days; considerable febrile excitement; eyes quite sensible to light, and ears to sound; face flushed, countenance very serious, almost melancholy; — intelligence perfect, but answers short, as though disturbed by the effort to speak; no trouble in chest, none, or but very slight, in alimentary canal; — no local symptoms then, but those of cerebral affection, and those slight; — still, hot skin and excited pulse, which must be accounted for. On the whole, the probabilities were in favor of an inflammation of the brain, or membranes. He was twice bled and is much better; but the sensibility to light still continues. This does not seem to be an extraordinary case upon paper, — and yet to a mere hospital observer it is so; — because it shows him the disease in its very forming stage, which is in every disease by far the most interesting, the most important, and the most worthy of close attention and study. It is from this circumstance that I have been much interested in it.

Is it not deplorable, my dear father, that our science is yet so impotent, as to the means it affords us to discover the *first* morbid changes, be they of function, or structure; which last is indeed but a continued change of function, or rather a result of that change? Is it not deplorable that we are obliged to rest satisfied

with the discovery of the existence of an aneurism, or a schirrous pylorus, or of tubercles in the lungs, or some tumor in the brain, only at a time, when they are so far advanced as to be beyond our aid? Have not the public a right to demand something more of us than this? But there are limits set to the advancement of our knowledge by nature herself. She will not always indicate by appreciable signs her commencing disordered actions. Have we yet reached these limits; and is there not a portion of cases, in which appreciable signs do really exist, did we but know how to seize them? Has not this subject been too much neglected, my dear father? Have we not too many books devoted to the nice diagnosis of advanced disease, inevitably fatal; and too few upon that of commencing disease, which may be stopped in its progress? It is the most difficult, and yet surely the most important of all the subjects, to which the medical observer can turn his attention. I do not forget that the diagnosis of an advanced disease, a cancerous pylorus, for example, is useful; that we are better able to give proper advice to our patient, than if we did not know that such a disease existed; — but, surely, it would be far better if we could be apprised of the first disorder of the vessels engaged in this morbid process. I know well we can never become perfect in this respect; — yet I cannot but hope that the time will come, when we shall be far in advance of our present knowledge. At present, the discovery of even far-advanced disease, which is soon to destroy life, is often beyond our power.

My mind has been turned to this subject for a day or two from reflecting upon two cases, now in our wards; — one, that I have just related, of commencing cephalitis discovered at its debut, in which life was saved by active treatment; and a second, of aneurism of the thoracic aorta, which is but lately discovered and will shortly prove fatal; — an exceedingly interesting case.

Dec. 17. — I believe I have already written you that my attention has been much turned, since I have been in Paris, to the distinction between vesicular and bronchial respiration. It is the most essential distinction with regard to respiration. Andral, by his book and in his ward, first turned my attention to it; indeed, he has insisted very much more upon it than did Laennec, and in my opinion he has rendered a very great service to the science of auscultation. He has lately written an article on the subject in a new dictionary of medicine, which is short, but contains some most excellent remarks, some distinctions which I have been able to see verified. During the last week cases, in which this bronchial respiration exists, have multiplied most surprisingly in our wards;— I was this morning counting them, and the number at present under my eye is eight;— seven at la Pitiè, and one at the Enfans Malades. They are mostly from pleuritic effusion, — one from hepatization and perhaps two, — one from dilatation of one of the bronchia. This last is doubtful, but quite probable. I suspect, by-the-by, that that form of phthisis which you have called fistulous phthisis, in which there is one small cavity, is in fact a disease depending on a dilatation of the bronchia; — in these cases, all the symptoms of phthisis sometimes occur. In them one circumstance of healthy anatomy, undiscoverable in a healthy state of the lung, is manifested in this unhealthy state, viz.; the existence of a muscular coat in the bronchia, which in this disease is hypertrophied. My authority is Andral.

I wrote you in my first sheet that I have been lately interested in diseases of the brain. I have had the good fortune, this evening, to see a very beautiful morbid specimen of diseased brain. A child of four years of age entered last evening at the Hôpital des Enfans. For the last month it had had occasionally slight convulsions, but its health was perfect-

ly good, it was playing about till yesterday-noon, when it was suddenly taken with severe convulsions and brought to the hospital. Last evening when I saw it, every part, face, arms and legs were in continual convulsive motion; it was insensible to the hardest pinching of the skin, and blind. I laid my finger upon the cornea without disturbing it; pale; died at nine and a half P. M.

Autopsy. Tumor (tuberculous?) nearly the size of a hen's egg in the right hemisphere, near, behind and external to the corpus striatum; the white substance surrounding it was in a state of the most complete ramollissement, absolutely fluid, though tenacious. In one of the lobes of the cerebellum there was a similar, but smaller tumor. The case is extraordinary from the absence of symptoms, and the continuance of the health of the child, and also the rapid termination from the first development of symptoms. These diseases of the brain are more than sufficiently obscure; — here is a case of most extensive disease unattended, as we may say, by any symptoms; for a long time, at least, it was so. It is not a week since a woman died at la Pitiè, with paralysis of the right side, almost complete, with great feebleness of the left; — loss of speech and consciousness; in fact many of the symptoms of apoplexy, which had come on within three or four days before her death, and on examination we found nothing, or next to nothing, to explain the symptoms. — What a contrast between the two cases. In one, most striking symptoms and no appreciable disease; in the other, no symptoms and very extensive disease. Much depends, I know, upon the rapidity with which each progressed; — but with all allowances of this sort, there is yet much unaccounted for. I find it very useful thus to bring cases of the same sort together, to study their resemblance, and their distinctions, and endeavor to draw from the

whole something, which shall make a durable impression upon my mind. It is thus that I have done in those cases of pleurisy and four or five others, of which I lately wrote you. It is thus too, that I have enumerated and brought together all the cases, in which I hear the bronchial respiration. I find it useful, though you may complain, that I too often make you read my boyish studies; that I read loud and disturb my betters, when I ought to read to myself. But after all, perhaps, you may like as well to receive letters which shall show you what is the bent of my mind from time to time, although rapidly and poorly sketched,—as on any other subject upon which I can employ my pen.

PARIS, DECEMBER 27, 1831.

I intend giving you a short list of the cases of stethescopic interest, which have been under my eye and ear since I last wrote you, in order that you may realize that I have, not only nominally, but actually an opportunity to acquire a certain degree of facility in the exercise of auscultation and percussion. To any but my father, to send such a list might seem to betoken either a degree of vanity, or a desire to impress the reader with an idea that I possessed more proficiency than I really do; but you will understand my object, viz; to present you with a picture of that which actually engages my attention, that you may realize it.

1. Woman, — acute case, palpitation of heart; pain in left side of chest, especially on percussion; dyspnœa; flatness over greater extent than common in præcordial region; nothing peculiar by auscultation; — pericarditis? The case is uncertain; the legs are œdematous. Louis depends very much on

percussion in the diagnosis of this disease; he has written an able memoir upon it, which I shall send you in the spring.

2. Phthisis; cavernous respiration, gargouillement, pectoriloquy under right clavicle, but all much more distinct in superior spinous region behind; voice for last few days almost extinct; excessive difficulty in deglutition; pain in larynx. Diagnosis. — Cavity in summit of right lung, whose parietes are thinner behind than in front; laryngitis; ulcers of epiglottis; death; diagnosis fully confirmed.

3. Sibilant and sonorous râles over both lungs, varying in degree, with paroxysms of asthma. Louis says, emphysema. I believe it is a congestion of the mucous membrane, perhaps complicated with emphysema.

4. Gargouillement, and dulness on percussion under left clavicle; voice modified, though not perfect pectoriloquy; right clavicle dull on percussion; bronchial respiration there; commencing cavity in summit of left lung and tuberculous induration in summit of right.

5. Double pleuritic effusion; flat on percussion over lower half of each chest, behind; ægophony and bronchial respiration left side; of the other I am not sure what we discover in the voice or respiration, — it has been a very latent case. — December 30th, perfect ægophony on the right.

6. Latent pleurisy of left side; effusion, now mostly absorbed; ægophony has disappeared; respiration returned; almost as sonorous as opposite side on percussion.

7. Woman, who had pneumonia some months since at Hotel Dieu; no symptom of diseased chest at present, full flesh, etc.; under treatment for leucorrhea; crepitous râle over two thirds of left lung. Is it œdema, the remains of pneumonia of six months' standing?

Dec. 30. —8. Woman, past forty years of age; symptoms of diseased heart since age of nineteen; now extreme ascites and œdema; percussion over præcordial region natural; by auscultation also natural; nothing positive then from stethescope, yet important to note that there is nothing; for the other local and the general symptoms prove an affection of the heart. Louis says all these symptoms may be produced by an ancient inflammation of the pericardium, especially if this membrane has become ossified. Laennec has related a similar case, and I think Andral likewise. There is no proof of hypertrophy, or dilatation.

9. Near the last is a young woman, who has the local symptoms of a hypertrophy of the left ventricle, dating two years back, without any general symptoms; palpitation; under stethescope, great impulse in front and behind.

10. A fine case of aneurism of the thoracic aorta, of which I have before written you; slight projection of right side of chest; fremissement cataire sensible to hand, bruit de soufflet to ear, and complete dulness on percussion over some space; *excessive dyspnœa* on the slighest motion.

11. Woman, phthisis; very distinct cavernous respiration in both supra-spinous regions; pectoriloquy very distinct at left, less so at right; no gargouillement; cavern in summits of both lungs.

12. Sibilant and sonorous râles over both chests; resounds well on percussion; asthmatic paroxysms at times, and constant dyspnœa in some degree; congestion of mucous membrane.

13. Commencing phthisis in a man with scrofulous abscesses in neck; flatness and diminution of respiratory murmur under right clavicle.

14. Flat sound over two-thirds of right chest, want of vesicular respiration, but fine bronchial. Louis says pleuritic effusion; I doubt between this and hepatization of lung.

15. Young boy, very interesting case ; sound entirely flat over whole left chest ; entire absence of respiratory murmur ; six weeks since, on entrance, the chest on this side was contracted ; now enlarged, intercostal spaces obliterated, heart felt to beat on right of sternum. Louis says tubercles throughout whole lung ; but I say an effusion, probably purulent, into left pleura ; — we shall see.

16. Phthisis : — perfect pectoriloquy, loud cavernous respiration and great gargouillement over space of five inches diameter, from right clavicle downwards ; enormous tubercular excavation.

17. Gargouillement, pectoriloquy and cavernous respiration, in both supra-spinous regions ; loss of voice ; cavern in summit of each lung, ulceration of larynx.

18. General symptoms of organic disease of the heart, bruit de soufflet especially on right side of heart, for some months ; latterly more dyspnœa ; flatness over very extensive portion of chest, about præcordial region ; sub-crepitous râle right side of chest ; disease of right side of heart ; effusion into pericardium ; œdema of right lung.

19. Cavernous respiration, or rather a loud soufflet under right clavicle, with pectoriloquy, in an old man who has had catarrh for a long time, and not attended with any symptoms of phthisis. Probably dilatation of bronchia.

20. Very interesting case, in ward about two months ; dyspnœa and other symptoms of disease of heart or great vessels ; impulse of heart natural ; an inch or two below left clavicle *battement simple*, (See Bertin) stronger than pulsation in cardiac region ; same *battement* in corresponding point behind ; no projection or tumor whatever ; aneurism of the aorta. Died yesterday,—diagnosis fully confirmed ; large aneurism commencing just after arch, also false membrane and serous

fluid in pericardium. The pericarditis had been overlooked. I shall never forget this case.

21. Man, aged, enormous pulsation of both ventricles, especially left; other general symptoms of the disease I have not mentioned; autopsy; general enlargement of heart; hypertrophy of both ventricles especially left.

22. Flatness, more extensive than common, o ver præcordial region; strong impulse of left ventricle; pulsations of jugular veins; pulse at radial artery very small; general symptoms of diseased heart. Death; hypertrophy of left ventricle with diminution of its cavity; dilatation of right ventricle; orifices free; remarkably small pulse with diminution of cavity of left ventricle; Abernethy's pathognomonic sign of contraction of mitral orifice disproved.

23. Old woman, great impulse of heart; pulse exceedingly small, especially in left wrist; flatness and ægophony right side of chest; organic disease of heart; effusion into right pleura. Will probably die to-day.

24. Old woman, œdema, ascites, very small irregular pulse, *enormous*, *enormous* impulse of heart; flatness extensive over præcordial region; flatness and bronchial respiration right side of chest in two lower thirds; tumor below right hypochondrium felt through a fluid. Death; great general enlargement of heart; ossification of mitral valve; piece of bone nearly an inch long, a quarter of an inch thick and broad; hypertrophy of left ventricle, dilatation of right; fluid in right pleura; liver descended nearly to crest of ilium.

25. Very interesting, — woman forty years of age, — entered six weeks since, — said she had pain in præcordial region, palpitation, and swelling of lower extremities, five months since; had been convalescent; now dyspnœa; flatness over præcordial region more extensive than natural; one or two

pneumonic sputa; cough; crepitous râle in two or three points behind. Was bled, etc., — went on pretty well for four or five weeks, — exposed to cold and fatigue; increased dyspnœa, cough, more pneumonic sputa, crepitous râle in two lower thirds of right lung; next day bronchial respiration on side about opposite sixth rib; bruit de cuir, or rather a sound precisely like that produced by chewing India-rubber, over region of heart; would not permit percussion, and would not allow any examination during four last days of life. Diagnosis. Pneumonia of right lung. I added on the authority of Collin and Meriadec Laennec, pericarditis, with false membrane but not adhesions. (Andral was not there; it was in his ward; we were all young men who saw the case.) Autopsy. Sero-purulent effusion in right side of chest, — hepatization of two lower lobes; hepatization of part of left lung; small quantity of sero-purulent fluid in pericardium, — heart and pericardium covered with false membranes.

26. Old woman, orthopnœa; swelling of lower extremities, etc.; *double* bruit de soufflet or rather de scie, for it is very loud and just like the sawing of timber, especially on right side of heart. Diagnosis. Disease of heart, impossible to say of what nature.

27. Man, flat behind, right side chest, ægophony, absence of respiratory sound; pleuritic effusion.

28, 29, 30. Man and two women, each an enormous cavity in summit right, or left lung, indicated by a frightfully perfect pectoriloquy in two, and by gargouillement and loud cavernous respiration in all.

These are all at la Pitiè, — at the Enfans Malades, just now, there are very few cases of interest.

31. Boy of four years of age. Pneumonia for three or four weeks, in which we have formerly heard crepitous râle in

both sides; now constantly emaciating; pulmonary expansion very feeble in lower half of both lungs, scarcely any; hepatization of lower lobes, — pretty certainly of right, left more doubtful.

32. Pleurisy of right side in boy of twelve, followed by very great effusion, indicated by complete flatness over whole right chest; absence of vesicular respiration; full bronchial respiration; now considerably lessened; perfect ægophony.

33. Boy, aged ten, fever, latent pneumonia; flatness of right chest; absence of vesicular respiration and presence of bronchial in lower half of chest.

It is somewhat astonishing to me that during the last half of the month of October, I saw at least twelve or fifteen cases of acute pneumonia in this hospital; during the last two months, on the contrary, there have been very few. Indeed there is scarcely any acute disease in Paris, at this season. I have not seen ten cases of fever for the last three months. You will find my catalogue of cases dull enough, but they will tell you how my ears are employed. I have enumerated them only from recollection, as I sit in my room, by going round the wards in imagination. Of course I have forgotten some, but have mentioned the most interesting. I begin to think pericarditis a pretty common disease, for I have seen seven cases within three months, and three of these have been proved by dissection.

As for organic diseases of the heart, you see I have had lately a fine assemblage of them; and the two cases of aneurism of aorta have been very useful to me. As for advanced phthisis I have given you an abundance of cases. It so happens that at this moment we have but very few cases of commencing phthisis in the wards. You see, too, that pleurisy, more or less latent in many cases, is quite common among us; but not

of an acute or dangerous form. We have also many and quite interesting cases of cerebral disease. There are some points, some modes of examining patients with these diseases, employed by the French, which are neglected by us. I told you I was reading Lallemand; I have finished his work and am now engaged with Bouillaud. Lallemand is a man of talents; his work, besides many valuable details, contains some most important general considerations as to symptoms and pathology. It contains also some errors, as I think; but is on the whole a most excellent work, and I am very glad to have read it.

Note by Editor. — To medical students, who wish to know what they may find in a Paris hospital, the foregoing may be interesting, as helping them to realize the scene. It may not be without interest to some others, perhaps. For those who regard the diagnosis, I wish to add, that they should attend to the date of the letter; at a later period the writer would have been more ready to recognise emphysema of the lungs in the third and twelfth cases. Yet, in the present state of my knowledge, I should hold to the opinion I have long entertained, that a congestive state of the vessels in the mucous membrane of the lungs exists during the asthmatic *paroxysm.*

PARIS, JANUARY 15, 1832.

**** This bronchial respiration, especially, which is of vast importance, I have got to distinguish of late with much more ease; — from it I made a correct diagnosis an evening or two since at the Enfans Malades; and with children (as I have found from experience, and on talking with Andral about

it, a few days since, I found he had made the same observation as myself,) it is vastly more difficult than with adults to distinguish it from vesicular respiration. When I am examining children I adopt the following rule, which may or may not be a true one; it is at any rate my own. Between the moment, at which I first hear the entrance of the air into, and that of its exit from the lungs, I listen for an intermediate moment, in which there is an expansion, which lasts a longer or shorter time before the expiration commences. IfI find any such expansion, I presume the vesicles to be still free; if not, I call the respiration bronchial. You may not understand me; — in other words then, — the air in passing through the bronchia during inspiration makes a certain sound; on passing through the same tubes on expiration it again makes a sound somewhat similar; — if between these two sounds there is a third, which resembles the expansion of a number of little membranes by this air, I call the respiration vesicular; — if there be no such intermediate sound, I call the respiration bronchial. But is such a distinction always necessary in order to assure yourself of bronchial respiration? By no means. As I have told you, Andral divides this respiration into three species, all of which I have more than once tested; — one of them is that, in which the bronchial seems at first to be only an exaggeration of the puerile; — it is this which I have often found in children, and which Andral tells me he has found more in them, than in other subjects; during pneumonia. My rule is for this case; I think a close application of it, while my ear was on the chest, has enabled me in more than one instance, to make a correct diagnosis. I suspect you will hardly believe it, at least I should not, when I was last with you, that it requires a vast deal of attention and habit in many cases, to say

which lung is hepatized in an infant; so much is the respiration upon the diseased side, like that upon the sound. I do not speak from one instance but from a great many, which I saw two months since, and such as I now see again in abundance.

On the whole, pneumonitis, in its first stage, is easy to distinguish in children; but not by expectoration; there is none; not always by cough, for it is sometimes very slight, and belongs also to bronchitis; not by oppression, for it is not always present, and occurs sometimes to a great degree in bronchitis; not by febrile excitement, for this too accompanies bronchitis. As to the remissions in the morning I have not been able to attend to it; my visits are made necessarily always in the evening. Not certainly, but more certainly than by any other means, by crepitous râle; this in the child is almost constant and *very marked;* but unhappily it does sometimes occur in cases, which we cannot believe to be anything more than bronchitis; — if not the crepitous, at least the sub-crepitous. I shall make some remarks to you on this subject, in my next. I believe, I have learned here some limits to Laennec's pathognomonic signs, which, though I am sorry to find them, as they are true, it must be useful to know. But when you come to the second stage of pneumonia, contrary perhaps to your previous expectations, you will find the physical signs far less easy to seize, though to be sure, the general and other local symptoms will then generally aid you greatly. Percussion is here, often useless; — in vain will you endeavor to make a difference in the sound of the two sides; I do not say always, but often, very often; — and the bronchial respiration is very difficult to appreciate. I should blush to have written you such a letter, but that I know my experience in the auscultation of children is far greater than your own. I will write you, by the next, an account of my difficulties and deficiencies in this branch.

PARIS, JANUARY 16, 1832.

I have written you several times of pericarditis; can you believe me that I have seen eight cases within three months. Louis has rendered a great service to science by his memoir upon that disease. He has established an almost certain pathognomonic sign. I can now subscribe to the four following propositions with regard to it, which I deduce from Louis's memoir, the cases I have seen in his wards and his clinical observations.

1. It is a common disease.

2. Like pleurisy it is often latent, being attended neither with pain, nor any of that assemblage of horrid symptoms, by which it is generally described.

3. It is simple in its diagnosis for one, who can exercise well the art of percussion; instead of being absolutely undiscoverable and only to be divined, as Laennec has said of it.

4. It is by no means so fatal as has been generally supposed.

Of the eight cases I have seen here, three only ended in death, and in each of these the disease was connected with other very extensive and severe thoracic disease. In the other five, it seems to have been uncomplicated, unless with a simple bronchitis. I would not have believed this when I left America. I now believe each of these propositions, as firmly as I believe the same with regard to pleuritis, although not to the same degree. But you will ask, in how great a proportion of cases there is sufficient effusion of fluid to afford a flat sound. Louis answers in his memoir, that of thirty-six cases collected from the best authors, in thirty-three the quantity of fluid was sufficient.

I have lately seen a case of death during, and from excessive hæmoptysis, in which the autopsy was against Laennec's apoplexy of the lungs, and against the theory of a ruptured vessel, and in favor of an effusion from the mucous membrane.

Jan. 22. — * * * * But I must not tell you the good side only of my auscultatory experience, neither must I allow you to believe me too great an enthusiast on the subject of auscultation. Know then, that I still make mistakes in my diagnosis with children, confounding the bronchial with the vesicular respiration, and vice versâ. I have twice made a mistake upon this subject, lately. Again, the various modifications of the voice are exceedingly difficult to seize, and will still require a good deal of practice with me. But in order to prove to you that I am not a blind enthusiast on the subject of auscultation, how shall I proceed better, than by stating several of the limitations, which I have here learned, to what I had considered truths and pathognomonic signs before I left America.

Thus, though much more confident in the art generally than when I was less acquainted with it, you will see that in advancing farther, if I have met with new truths, I have also met with new and unexpected doubts.

1. The crepitous râle is a sign of pneumonia; — here are two main difficulties. First, the distinction between crepitous and sub-crepitous râles, is, to say the least, very difficult and probably impossible at times, so nearly do they approach each other. I say impossible, for both Andral and Louis confess by their very words that they cannot decide, at times, to which class the râle they hear is to be referred. Here then are two râles indicating a different state of the parts, which cannot at times be distinguished from each other. Secondly, crepitous râle, which at times approaches so near to sub-crepitous, does not always indicate pneumonia. Laennec had already pointed out its existence in œdema of the lungs; but it occurs also, or at least a sound not to be distinguished from it, in two other cases; acute bronchitis, when the disease exists in very small bronchia; and in pleurisy, after the effused fluid is mostly absorbed and the false

membranes rub against each other. You may ask, if I only quote, or if I know these things. I answer, yes, to each ; I both quote and know them ; but my knowledge is as yet imperfect ; I have seen two instances at least of each, which were tested by all the other symptoms of the diseases ; but I have not yet had anatomical evidence of either.

2. Sub-crepitous râle. I have before said that it was at times difficult to draw the line between this and crepitous. Now, for the other extreme, — it is impossible to say when the sub-crepitous becomes mucous râle ; — this, however, is not so perplexing as the former.

3. Mucous râle. Here is a great difficulty. We hear the bursting of a few bubbles under the clavicle. Is it a sub-crepitous râle and is the part œdematous? Is it a mucous râle and is there an inflammation of the bronchia? Is it a craquement, a species of gargouillement, and have we the sign of some few softened tubercles? Or finally, is it pneumonia, in which there is also an inflammation of the mucous membrane, and is the sound produced by a mixture of the two sounds proceeding from the two parts affected? But again, — the difficulty of the accurate distinction of this râle does not exist *only*, when it is slight and limited. When it is very full and extensive, the mucous râle approaches so near to the gargouillement in a large cavity, that not only the most practised ears cannot make the distinction, but have actually been deceived. I would, if my paper would allow it, continue my remarks about some other râles and the various modifications of the voice. I have spoken above, not of imaginary difficulties, but of those which I have myself often experienced, and to which I have seen other and better men than myself obliged to bow. I have some ideas upon the varieties of crepitous and sub-crepitous râle, which I will submit to your judgment in my next letter.

You see I still remember to limit the reports of the stethescope, to compare them with the *rational* symptoms, and from this comparison to form my judgment. I never write you of other modes of studying pulmonic diseases, but do not imagine that I neglect them; *au contraire*, I flatter myself I have made some advancement in this part of the science also.

PARIS, JANUARY 23, 1832.

MY DEAR FATHER, —

I have an hour to spare before going to bed, and as I wish to review a portion of Andral's lecture of this afternoon, I will do it by giving you an abstract of the same. I shall retain the paper however to send by my friend S —. The general subject was the symptoms of phthisis, of which disease he has given a most learned description.

The part, which I am especially desirous of reviewing and sending you, is that in which he treats of the physical signs. Physical signs, to be derived from two sources, percussion and auscultation.

I. Percussion. — The evidence afforded by this means of exploration varies according to circumstances.

*First.** The sound may be every where normal; and this too, during all the stages of the disease, even after the formation of cavities; as when these are deep-seated.

Secondly. The sound, may be augmented partially, or generally over the chest; this augmentation may be only *apparent* as regards the lungs, or it may be *real.* 1st. Apparent from the great emaciation of the subject; the bony parietes will yield a clear sound which may be mistaken for the sound yielded by the lungs themselves. 2d.* Real from a modifica-

* For explanation of * see page 116.

tion of the parenchyma of the lungs, which may arise from three causes. 1. A large cavern, which is at once *superficial* and *empty* and not surrounded by indurated lung; 2. Emphysema, which, as I have already told you when discoursing upon the anatomical signs of phthisis, often exists around the tubercles. *3. Rupture of cavern into pleura, producing pneumo-thorax.

*Thirdly.** The sound may be diminished; this over a whole lung or more limited in its extent. 1st. From an agglomeration of crude tubercles;—this is not a very common cause *by itself.* 2d. And principally, from an induration of the parenchyma about softened tubercles or caverns;—from this cause you will almost invariably find a flat sound over a cavern.

*Fourthly.** There may be neither increase nor decrease of sound, but a change in its nature. The bruit de pot félé; (the sound of a cracked jar;) when there is a large cavern, this is sometimes observed, especially if the patient's mouth be open during percussion. This is rare, but you will remember a case, which interested us in the Massachusetts General Hospital, in which it occurred; and there are now three such cases at la Pitiè.

Add to the foregoing, that without percussion, on placing the fingers upon certain points of the chest, while the patient speaks or coughs, you will feel a peculiar sensation, a sort of vibration, which continues up through the whole hand. This exists, not when the portion of lungs beneath the hand is completely impermeable to air, nor when there is an effusion into the pleura in that spot; for in these cases no vibration is felt; but it occurs where there are a few disseminated tubercles.

As yet we have obtained no signs, which indicate the existence of *tubercles;* we have discovered only that there do exist certain lesions of the lungs, without indicating *their nature.*

II. Auscultation. Three points to be considered, — *respiration,* — *râles,* — *voice.*

First. Respiration. — 1st. In many cases, or at least in some, we must acknowledge that the respiration is *natural* throughout the whole course of the disease. This may be while the tubercles are crude, or even after they are softened and caverns are formed, if these be deep-seated.

2d. It is sometimes more intense than natural; — this phenomenon is very frequent, and you should always fear from it, if there be other symptoms of phthisis. It is on the contrary very rare in chronic bronchitis; whereas, when there are tubercles disseminated through the lung, the healthy parts seem *to act* more than common, as if to supply the place of those occupied by tuberculous matter. This intensity has very often excited my attention and is well worthy of yours, in forming your diagnosis during the early stage of phthisis.

3d. It is sometimes more feeble than natural; — either universally, which is rare; — or partially, as under the clavicles; which is very common.

4th. It is entirely wanting in some cases, — in certain points, or over a considerable extent.

5th. The inequality of the sound over a certain extent is sometimes very striking. Thus, you apply your ear, and as you pass along, at this point the respiration is natural, at the next it is wanting entirely, at the next it is unnaturally strong, and at the next unnaturally feeble; and thus at each point it varies. This inequality, which I have often observed, indicates almost certainly, indeed, I may say *certainly*, either the existence of disseminated tubercles, or of indurated lobules. By other symptoms you must decide which of the two. This inequality of sound is of very great assistance in the diagnosis.

6th. The respiration is heard, but it is modified. 1. Instead of being vesicular, it becomes bronchial, from the induration of the surrounding parenchyma and the agglomera-

tion of tubercles. Of this species of respiration I have already pointed out to you the important varieties in my lecture upon pneumonia. *2. Cavernous, — when the cavern is empty; thus, you may discover it at night, and it will have disappeared the next day. It will also sometimes disappear entirely after coughing and be replaced by a gargouillement. You will sometimes hear gargouillement at one spot and directly at its side the cavernous respiration. This may be explained by the existence of two near caverns; or of one which was partially divided by a septum. If you have heard what has seemed to you a cavernous respiration for a long time, and it has never been accompanied by gargouillement, you should suspect that the respiration is truly bronchial and not cavernous. *3. Amphoric, this is rarely heard, — yet it occurs sometimes in very large caverns, when quite empty. If the gargouillement has ceased, and these two last modifications of respiration continue, we may then hope for a cicatrization of the cavern. *4. Sometimes, though rarely, tintement metallique, in a large cavern.

Second. Rales. — 1st. Sometimes none whatever. 2d. While the tubercles are yet crude, all those râles *may* be heard which I have described to occur in acute and chronic bronchitis. * 3d. During the ramollissement, there may be either subcrepitous râle, or mucous râle. But, to be truly valuable in the diagnosis, these *must be heard always at the same point and for a considerable length of time.* — * 4th. After the formation of caverns, — gargouillement; — this sound is in my opinion the best proof of the existence of a cavern in the lungs; I find it more certain than pectoriloquy. You will sometimes hear it only after the patient has coughed; or rather on applying your ear it will not be audible, but will become so after a cough. Therefore, you should always ask the patient

to cough, before allowing yourself to decide whether this sign exists or not. *When the gargouillement is well marked and is always found at the same spot, it is the best proof of a cavern.* Take care not to confound this sound with a mucous râle. *5th. You will sometimes hear under the clavicles a variety of râles succeeding each other; and passing into each other; — craquement, sub-crepitous, mucous, etc.— when these exist for a long time at one fixed point, they indicate pretty surely softened tubercles, or small caverns.

Third. Voice.—The modifications of the voice are owing to two circumstances. — * 1st. A diminution of the permeability of the lung to the air. — * 2d. The existence of caverns. In the first we have an extraordinary retentissement of the voice; bronchophony. * In the second, the word spoken seems to pass directly into the ear; pectoriloquy. But, in the first place, these two phenomena are liable to be confounded with each other, and, in fact, are so confounded daily; varying as they do with a thousand circumstances. 1. They are heard sometimes even in healthy persons. 2. They vary as the tone is grave or acute. 3. They may arise from the size of the bronchia which open into the caverns. 4. They may arise from the greater or less induration of the parenchyma surrounding the cavern; 5. Or from the brides in the caverns; 6. Or from the quality and quantity of fluids contained in them. From these and other causes is an endless variation.

When I hear the peculiar retentissement of the voice, called pectoriloquy, without gargouillement, I am in great doubt whether a cavern really exists.

Again, very often when there is indeed a cavern, no pectoriloquy is found. Garguoillement is for me a much better sign.

Result. Of the signs afforded by auscultation, 1. Sometimes there are none. 2. Some are doubtful. 3. Some are

certain. But for an accurate diagnosis you must depend upon a combination of these various signs.

The above is only an abstract; I cannot pretend to give Andral word for word.

Those signs marked * on the margin I have observed myself, and can at this moment recall the cases in which I have observed them. Some of those not marked I am quite sure likewise to have tested, but as I cannot recall the individual cases, I do not choose to consider them as yet tested by my ear.

Although I should like to write still more upon auscultation, and especially of two or three anomalous cases of phthisis, yet, for fear that you may imagine me totally regardless of other diseases, and totally inobservant of therapeutics, I shall say a word or two more on other subjects, which have lately attracted our attention at la Pitiè.

First, then, of cancer of the womb. We have had ten or twelve cases of this disease in Louis's wards during the last four months, and he has lately called our especial attention to them in his clinique. It is useless for me to write about the ordinary symptoms; I wish only to allude to two or three of the most important points to which he has turned our attention.

1st, and chiefly, M. Louis has established that, in a great majority of cases, the first symptom of this affection is uterine hæmorrhage; not slight, but severe and long continued. Of twenty-one cases, which he formerly collected at La Charité, sixteen commenced in this manner; — of six which we have now in the ward, five certainly, and perhaps, the sixth commenced in this manner likewise. And I well remember two months since, that of five cases, then in the ward, all but one likewise commenced by hæmorrhage. M. Louis asserts, then,

that if a woman after the entire cessation of the menses at the due period, has a severe hæmorrhage from the womb, although there be no pain or other local symptoms, although on touching you find no evidence of disordered structure, still you should be very suspicious that a cancer will sooner or later follow in that part.

2d. Authors generally describe this disease, as attended with excessively severe pains, &c. This is sometimes true, but by no means so generally true as has been thought. Of the six cases now in our wards, in three there was no pain until a very advanced period; and then it was inconsiderable; and in one, although the disease is quite advanced, there has as yet been no suffering. The case of the old lady whom you saw frequently occurs to my mind; — if you know the fate of that lady, please to write it on the margin of this letter.

There is one very important subject in general pathology, on which Louis insists very much and very often, and which is certainly too much neglected. It is important not only as a matter of science, but also practically. It is, that in all acute diseases we should acquaint ourselves with the state of all the important organs, prior to the occurrence of this acute disease. Thus, for example, you see your patient with all the signs of pleurisy, which is considerable in extent and intensity. Your subject may have been in perfect health before that time, or he may for some months or years have had slight symptoms of pulmonic or other disease, which he will pass over in silence unless you question him particularly, most particularly, about them. It will too often happen, especially if the acute disease be striking and serious in its character, that the attention, not of the patient only but of the physician, will be entirely occupied by that alone, and the chronic disease, if there exists any, will remain unnoticed, to the future regret and dismay of both parties.

Of what vast importance is it in the case I have taken as an example, (pleurisy,) to know if your patient for some time past, has not had the commencing symptoms of phthisis. And yet in many cases, where the symptoms of the latter have been very slight, and the symptoms of the acute disease are so serious as to absorb the attention, how often has it happened that the practitioner has thought that he was treating a simple pleurisy, when in fact it was a pleurisy complicated with tuberculous disease. And here, under this mistake, how erroneous may be his prognosis. For pleurisy, by itself, simple pleurisy, is scarely ever fatal ; Louis says not more than one in an hundred, for *of sixty-eight cases which he has seen within six years, not one died.* And, on the other hand, when the same disease occurs in a tuberculous subject, what have we after a month or two convalescence ? disappearance of all the symptoms ? no, but the appearance of new ones ; — signs of softened tubercles and commencing caverns ; — loss of strength and emaciation, etc. ; in fine, declared phthisis. I am describing only what I am now seeing, and each day I feel more and more the necessity of acquainting myself with the previous state of the organs, before I allow myself to form an opinion of an acute disease.

I trust that I shall never forget the uniform importance, which Louis gives to his two first questions, and the untiring patience, with which he repeats them, until he has settled, so far as possible, the exact truth. " Depuis quand êtes vous malades ?" Perhaps the answer is three days or three weeks ; whatever be this answer however, the first question is invariably followed by a second ; " Avant ce temps-la etiez-vous tout-a fait bien-portant, tout-a fait, tout-a fait ?" Then follows a most exact investigation of the symptoms from the very first departure from health to the present moment.

I want to say a few words upon a disease I have frequently seen here, but never in Boston; the *colique de cuivre*, or brass colic. This is marked by pains, as in lead colic; but instead of constipation, diarrhœa; and yielding to a purgative treatment; as I have often seen under Louis and Andral.

I have seen the antimonium tartarizatum given in *full doses* in three cases of pneumonia successfully; but in each there had been a previous venesection repeated two or three times. I once saw, last summer, a man killed by the same treatment. You see I am laconic on the subject of therapeutics.

PARIS, FEBRUARY 16, 1832.

"Laennec has rendered a great service to science by his description of emphysema of the lungs," said Louis, yesterday evening; and I may add, Louis has rendered me a great, a very great service, by teaching me the characters of this disease, during life and after. His two last lessons upon this subject were invaluable. I did not know the disease when I left you, except in the pages of Laennec. I now know that it is common, and that a knowledge of it is very important. Shall I give you the proof that it is common? I have seen at least ten cases within six weeks; and I speak of those only, which I have myself examined either before, or after death. Shall I prove to you that an acquaintance with this disease is practically useful? I can do it in more ways than one; but I choose to illustrate its utility by telling you of a false diagnosis of my own.

Yesterday morning I examined by auscultation a young man, with whose history I was not acquainted, without having first practised percussion in a careful manner. He is emaciated

and coughs; that was all I knew of him, and, in truth, my examination was made very much en passant. I found the respiration much more feeble under the left clavicle than the right, and suspected at once the existence of tubercles. Having requested one of my friends to examine him, he came to the same result, and in the evening we mentioned to Louis our suspicions that the subject was tuberculous. He said he did not believe it. On careful examination we found that the percussion was more sonorous under the left clavicle than the right, but at the same time the murmur of respiration was much feebler under this left clavicle, as it was indeed over the whole extent in front, where the sound on percussion was still quite sonorous. We now saw our mistake and immediately recognised an emphysema. On inquiring into the history of the case, we found that it accorded with this last supposition, but not with that of a tuberculous affection. Here would have been a very grave error in the diagnosis, on my part; and the lesson was a very useful one. I cannot doubt that many a case of emphysema has and will be mistaken for phthisis by those, who are but partially acquainted with the science of auscultation; — unless they are so well acquainted with the natural history of phthisis, as to be able in a great measure to supply thereby their deficiencies in the "musical science." I asked Louis whether he had often seen emphysema mistaken for phthisis; — he answered, very frequently.

Andral has some very interesting views upon this subject, differing from those of Laennec and in my mind more tenable, and better supported by actual anatomical investigation. You will see them in his chapter upon atrophy of the lungs, in the Anatomie Pathologique.

I walked to the hospital, this morning, with M. Andral, and asked him what you desired, with respect to the greater fre-

quency of intestinal inflammation during fever in France, than in England, or America, viz. whether it was not partly owing to the neglect of purgatives by the French. His answer was a just one ; — " perhaps so, sir, but a series of experiments with purgatives in Paris is necessary to prove it ; — and, again, this disease of the intestines is observed very early in the disease, by the fifth or sixth day even." He added, that he had observed and was much struck with the observations of Mr. Alison, of Edinburgh, by which the intestinal affections seem to be more rare than in France.

* * * * But I have almost forgotten to tell you of a case, which shows me of what use auscultation and percussion are to be to me in practice.

I observed, a few days since, that one of my young friends here looked rather unwell, rather more so in fact than is common from a slight catarrh, which was all he complained of. I told him, I should come and see him at night, and went accordingly. We laughed and talked for some time, he appearing pretty well. On my questioning him, I found he had a little pain on the right side on coughing and on full inspiration. He thought nothing of it, however, and said he had nothing but a slight bronchitis. I examined his chest, not expecting to find anything, so slight were the local and general symptoms. On the right back, however, I found evidence, by percussion and auscultation, of a considerable pleuritic effusion. I bled him fully; he has recovered and the fluid absorbed. I mention the case to you, because it is the first time that I have been obliged to practice upon the evidence of auscultation, in an acute case ; and because cases of this sort cannot be too often cited, so frequent, so latent and so important are they. How many thousands of pleurisies pass

unnoticed. Not so, in Louis's wards, however; and thanks to him, not so many will escape me as would have, without his example and instructions. In the present case, perhaps, indeed almost certainly, this young man would have recovered without any treatment. But, if the disease had not been discovered, it would probably have been aggravated, as he would have continued his dissections in a cold room, and in other ways have exposed himself; and the inflammation might then have extended from the serous to the cellular tissue.

Feb. 17. How unhappily imperfect are our histories of even the most common diseases! How often have exceptional cases been mistaken for ordinary ones! What false descriptions have authors given us of pleurisy and pericarditis, for example; taking for the type of those diseases a few rare cases, which were attended with very positive and striking symptoms, and overlooking the vastly more common cases, in which those symptoms are far less marked and sometimes entirely absent! I have been especially struck with this in pericarditis; — and what have been the causes of this error? Perhaps, chiefly two; — first, owing to an insufficient examination, *a large majority* of cases are overlooked during life. This you know to be literally true in the case of pleurisy, and I believe it to be so in pericarditis. I often think of your recital of the case of pericarditis in a certain cook, since I have attended to this subject; and when you have received one of my letters of about a month since, I do not doubt you will remind me of it. Second, because practitioners have not been in the habit of *counting* their cases, preferring to trust to their memories and what is called general observation. Louis is the father of the numerical system, and will at some time publish to the world the tables containing the results of his practice. There can be none more valuable, for diseases

of the chest at least; for he is the most exact in his investigations and diagnosis of any living man.

* * * * "But," says the practical physician, "this is all nonsense; why trouble yourself about a disease, which nature will cure without your help, as she will all, or almost all those cases of undiscovered pleurisy, and pericarditis too?" The practical man here forgets what should be the first principle of every good practitioner in medicine, or morals; — to treat disease successfully, we must attack it at the commencement; and many of these cases, which begin with such latent symptoms, and which are, in very truth, of themselves comparatively unimportant, become very severe and fatal from a neglect of even hygienic rules. A man continues to expose himself while affected with a latent attack of pleurisy, and in a week he may have an extensive pneumonia, which shall destroy him. But, again, the man who enters into the field of pathology with his eyes open, and does not love truth for truth's sake in his scientific researches, may possibly be a *moral* man, though I should almost doubt it; at any rate, he will make a *very poor practitioner*. I must indeed work for my bread, but, in working, if you take from me the interest which search after pathological truth inspires, I can no longer work well.

PARIS, FEBRUARY 27, 1832.

**** The truth is Louis is a remarkable man, and his system of pursuing medical science a most excellent one. There are without doubt many questions that cannot be resolved by counting; but to draw a description of the natural history of diseases, you cannot proceed without it. What is the chance that such a disease will prove fatal? How often does such a symptom occur? What part of an organ is most

often affected in a certain disease? How often is such and such a lesion found after death, when such and such symptoms have preceded? These are all questions of immense importance, and they can be decided in no other way than by an accurate observation *of all the cases* which occur, and a *counting* of them with respect to each point. You state for instance, that pneumonia occurs oftener on the right than on the left, that it affects the lower oftener than the upper lobes; suppose some one chooses to doubt it, and demand of you what is the proportion, in order that he may know whether your knowledge be exact. You have made no table; you can only tell him such is your general experience. General experience has for this once told you the truth; but it would be much more satisfactory for your student, if you could give him the result in numbers deduced from exact observation. And, in fact, what is this general experience; it is the result of an enumeration of the cases, seen by an individual, in his own memory. But how much better would this enumeration have been made on paper; for who can tell that from some peculiar circumstance or association, one class of cases may not have excited his attention, and, therefore, left a more permanent impression than another; — so that a greater number of these first would enter into the calculations of the memory, than of the last. Had medicine been studied for one hundred years, as Louis now studies it, our knowledge of the natural history of disease would be placed upon an infinitely more certain basis; and diagnosis, and prognosis, and consequently therapeutics vastly more advanced. On my return I will prove to you the advantages of this system. Inspired with this belief, viz.; that the only way to place our knowledge of disease upon a true basis, is to make rigorous observations, and to *count* them under their various bearings and relations, — a set of young men, who have

for a long time followed Louis, (and some of whom I know, or believe to be the most intelligent of the French students, my collaborators, of whom I wrote yesterday,) intend forming a society, whose main purpose is to make exact observations over the whole world, as far as may be; and from these, properly arranged and submitted to the numerical method, to arrive in the course of years at certain and fixed laws. Those, who have followed Louis, the father of this method, are alone to become members; and of those I trust only a select corps; for the majority are not fit to make accurate pathological investigations. As yet, I am the only American who knows of their plans, and I certainly shall with great pleasure become a member, promising in all honesty to elicit from our public institutions whatever is in my power. I shall love to work for such a society, because it will be useful not only to myself, but all; and again, by so doing I shall keep up an acquaintance with those Europeans who will be the most distinguished in medicine during my day. Say nothing of this as yet, for it is not made public,—I shall write you as soon as the society is organized and explain in full its objects, etc. It is to me, a new spur to study; — for I am now *learning how to observe.*

PARIS, MARCH 1, 1832.

Louis's wards. A new and striking case of emphysema has just entered, and I will take occasion to say a few words on this subject. You remember that Laennec first pointed this out clearly; though Baillie had already noticed it. Laennec attributed very many cases of asthma to this affection. Before I left home, not having seen a single case, and not being acquainted with its anatomical characters even, except from

books, I could not persuade myself that it was so common a disease. I am now fully persuaded it is a common disease; and that it is one of the causes of asthma; either being in some cases the sole cause, or as I strongly suspect coexisting, especially during the paroxysm, with a congestion of the mucous membrane;—itself being the constant lesion; and this congestion, at various periods and from various causes being superadded. This is my opinion from what I have observed of the symptoms. I have no post-mortem evidence of it;—and Louis does not accord with me, but I think Andral does. * * * * But be that as it may, I will state to you the symptoms which characterize emphysema, and then the additional symptoms, during the severe paroxysms, which lead me to believe in a concomitant congestion of the mucous membrane.

The distinctive characters of emphysema are 1. A more than natural sound on percussion. 2. An absence of the sound of pulmonary expansion in the same part, or at least a murmur which does not at all correspond with the full sound on percussion; being, for instance, less full than on the sound side, where the percussion is less sonorous. These two are the most characteristic signs. But, 3. Very frequently (I have seen it in four cases, which I now call to mind, and doubtless in others, which for the moment have escaped me) a projection, saillie, or bombée of the chest over the part affected. This, when it exists with the other two signs, adds much to the certainty of the diagnosis; but alone it is not enough, for it often exists in pericarditis, as I have seen in three cases; in pleurisy; in aneurism; and in some other more rare affections, as pneumothorax, and anomalous tumor, &c. But in all these the other local, with the general, symptoms, and the march of the disease will easily enable us to make the distinction.

4. In one form of emphysema (interlobular) is heard a dry râle, crepitous, *á grosses bulles*. This form of the disease I have not yet seen during life;—though I have twice seen very beautiful anatomical specimens of it. Thus far I have spoken of the physical signs only;—there is much to be learned by the history of the case. 5. It generally, and as far as my experience goes, (which is founded upon about twelve cases,) always follows a chronic pulmonary catarrh;—and you will find a very ingenious explanation of the mode in which it is created in Laennec's chapter on the subject. 6. Dyspnœa, constant to a certain degree and occurring in paroxysms, and obliging the patient frequently to sit up in bed a good part of the night. 7. Full expansion of the chest, with inability to get air enough. 8. Expectoration after, or during a paroxysm, of a great quantity of serous, frothy fluid, mixed with more or less mucus, clear, or opaque, according to circumstances. This I have observed in several cases, so that a peculiar thin, frothy appearance of the surface of the fluid in the spit cup, at once creates in my mind a suspicion of emphysema. Perhaps there are some other symptoms, which at the moment escape me; for I am writing extemporaneously, (so to say,) and eliciting the symptoms, not from books, but from an analysis of the cases I have seen in my own memory. You see that the only two characteristic signs are the two first, and they must exist together. The truth of them I have seen tested by anatomical demonstration.

Now for those signs, which do not exist constantly in this disease, but which I have several times found during the paroxysm; or if existing at other times in some cases, only very limited in force and extent. These signs are those various râles, which go under the name of sonorous, sifflant, sibilant, etc.; all of which indicate either a congested state of the mucous membrane, or

the presence of an unusual quantity of mucus upon that membrane, or both together. And it is precisely from the circumstance of these râles existing at the time of the paroxysm only, from the increase of dyspnœa, at this time, (which cannot be owing to the state of the vesicles, for their lesion is permanent and not changeable,) and from the termination of these paroxysms in an expectoration of mucus and serum, that I have arrived at my opinion with respect to this occasional and transient concomitant of emphysema; and this, though not the constant lesion, is perhaps for practical purposes the most important; as in the actual state of our art we can in no way remedy the original lesion, and as each paroxysm, with this its cause or concomitant, must have a tendency to increase the original lesion.

There is another complication of emphysema with tubercles, of which Andral has spoken and which now interests my mind very much; because I and some of my young fellow-students think that we have evidence of its existence in one case now at la Pitiè. The case has taught me a great deal, and cost me much reflection, and, perhaps, in some future letter I will write upon the subject. You have surely by this time read enough of my hasty lines on emphysema, in this.

* * * * You write so warmly of Hodgkin's museum and Hunter's, as to excite in me a strong desire to enjoy these promised pleasures. But I shall not hurry while Louis calls me to listen to his interesting clinique, in which he gives us the thread, whereby to walk through the labyrinth of pulmonic disease; and while he deigns to teach me in a more familiar manner in his wards. Neither do I feel inclined to tear myself from the eloquent course of Andral, of which I have as yet taken most copious notes; nor to forego the delight of his clinique, which will commence in May.

Paris, March 20, 1832.

* * * But there is another extremely important sign in pneumonia; — it is the bronchial respiration after hepatization. I had no idea of its value in this disease, nor indeed in any other, before I left America. After a vast deal of practice and attention to and thought upon the subject, I hardly know a more important sign in relation to many diseases, (I speak of auscultatory signs,) than this bronchial respiration, either alone, with crepitous râle, or with a degree of vesicular respiration; the last constituting the *respiration rude* of Louis. It is the most difficult to attain, the most valuable when attained, of all the distinctions which the ear recognizes. It requires much time; — at least, such has been my experience. It was very long before I knew well the natural respiration, the sound of vesicular expansion; — i. e. it was long before I had my present ideas and understanding of it, and could make such use of them as I now can. When in England I will write of something else than auscultation; for you must be pretty well wearied with my school-boy remarks upon it.

March 24th. — One word more upon bronchial respiration. For as much as two months I have made the following remark, and from very frequent observation am quite convinced of its correctness. In some commencing cases of phthisis, when the respiration is not yet truly bronchial under the clavicle; when we still hear the vesicular expansion, and nought else on *inspiration*, I have discovered the bronchial sound on expiration. In other words, as the tuberculous deposit advances, the bronchial *expiration* may be heard before the bronchial *inspiration*; — it may be heard at an earlier period of the disease, and may thus become a very important sign as making known the disease yet sooner after its origin. This circumstance is very explicable. As soon as tuberculous matter is

deposited, there exists a solid material around the bronchia, which will transmit the sound made by the passage of the air through these tubes; — but thus early a great portion of the lung, even in the part affected, (the summit,) is permeable to the air; and therefore the murmur of vesicular expansion, on *inspiration*, entirely masks the sound of the air passing through the bronchia, which would otherwise have been transmitted through the surrounding denser medium. On expiration, however, circumstances have changed; — the air on passing through the bronchia produces the same sound as on its entrance; and, as now there is no vesicular expansion to mask it, it is easily transmitted through the diseased or condensed part to the ear of the observer. I do not know whether I have made myself intelligible, for I have written this page at three different times, being twice interrupted.* I believe the observation to be both important and true. You see I am getting to make nice distinctions in auscultation, perhaps you will think, too much so. But I assure you, you cannot, at all judge of my knowledge of this subject now by what it was, when I left you. Louis chooses for us the most delicate cases; — makes us examine and report to him the result, without telling us his opinion, and even without allowing us to learn any thing of the history of the case, lest we should be prejudiced. I am exceedingly happy to add that it very rarely happens that we differ in opinion from this master of his science.

I feel confident that our "Society of Medical Observation" will be a useful one, and am sorry that I cannot pass one year

* Louis has at last seized this distinction; this very afternoon for the first time, I have heard him mention it, and on my stating to him my explanation of the facts, he was pleased to consider it at least ingenious and probably true.

in sharing its labors under the directions of Louis. The object, as you know, is the *exact observation* of diseases, and from the cases afforded, to deduce what general facts may be rigorously deduced.

The numerical method, *without care*, may lead into error;—but, first, it must lead to a vast deal of good; and second, as for the care to avoid those errors consequent on an omission of a full consideration of all the circumstances, if any man will, and does secure himself, it is Louis, the father of the system. His wards are the only ones I have ever seen, except your own, where the facts were all truly, fairly and scrupulously noted; and on one branch he *necessarily* surpasses you, viz.: morbid anatomy; for in our country it is impossible to follow this subject with such freedom, owing to the prejudices existing among us; and at our hospital our cases are necessarily imperfect, as we do not retain our chronic cases, as they do here, till death.

* * * * There are two or three young men whom I should be proud to see in Boston, especially Maunoir and Lacaze. They are young men whom I shall always remember with pleasure and respect.

March 29.—Little did I think, my dear father, when I began this letter, that I should be obliged to close it with such unwelcome news. The cholera is in Paris;—or, to say the least, it is generally believed to be both by the public and by physicians; and I fear the evidence is too strong to deny it. Of facts, I as yet know very little;—I have heard and read in the journals, of several (from ten to fifteen) cases at Hotel Dieu and in the city. I have conversed with those, who have seen some of these patients during life, and with others who have been present at some of the autopsies of those, who have died.

For my own self I have been witness of an autopsy of an individual dead at la Pitiè in Louis's ward, and whose whole history is like that of cholera; — but I did not see him during life, as he entered and died the same night. I have this moment breakfasted since my return from a visit to his wife, with M. Louis, to learn as exactly as possible the circumstances of the case. His case and dissection were as follows.

Man, chiffoniér, aged fifty, for last three years somewhat out of health; — cough and asthma for ten years; — still he had good appetite, eating well and worked as usual. For six weeks has complained of colic pains from time to time, but has preserved a perfectly good appetite, and eaten as usual; — wife does not know whether he had diarrhœa during this time or not. Habits good; did not drink; this was confirmed by friends as well as wife. On 26th, was as well as ordinary, dined with his wife as usual, and went out to follow his customary occupation of chiffoniér; — did not return that night, which did not alarm the wife, because when employed late, he often remained the other side of the river to sleep in a chamber, where the gleanings of the day were deposited. In the morning, 27th, she went to this spot, and there found her husband upon the floor, helpless and speechless, though yet retaining his mind sufficiently to indicate to her that he had intense pain in the abdomen, and had been vomiting; — the material vomited was, as she says, like water, or like a *potage aux choux* with beans; — he could neither speak, nor make use of his limbs; — she having called for aid, he was immediately carried to the Bureau Central des Hopitaux, where he again vomited as before, and thence to la Pitiè. She first saw him at eight, A. M., and he arrived at la Pitiè at two, P. M., or before perhaps; — it was impossible to ascertain with precision at what hour he was taken sick, as he was

speechless, and no one with him ; — for date, we know only that it must have been after dining with his wife on the 26th, as he then ate, and was as usual. Arrived at the hospital, he was seen by Mr. Eager, a young man who observes with great accuracy ; — his countenance was almost black ; his limbs cold ; from time to time terrible convulsions, or cramps ; he did not again vomit, but had numerous dejections, liquid, somewhat yellow ; no pulse ; speechless and helpless as before, but still retaining his intelligence ; and died at eleven, P. M., making in all not much more than twenty-four hours of sickness at the most, and very probably not so much.

This morning, thirty-six hours after death, he was examined by M. Louis, in the presence of M. Andral and a host of students. I attended very closely to the morbid appearances, and noted them on the spot.

Externally. Nothing very remarkable in the face ; — hands and nails almost black ; limbs contracted, and excessively stiff, or *raides*, as the French say, requiring great force to extend them from their flexed position.

Head. Brain, nothing peculiar, unless the arachnoid was more injected than common, where it enters the ventricles at the great fente of Bichat. Larynx, Pharynx, Par Vagum, cervical ganglia, natural.

Chest. Peculiar feeling of pleura, collée, sticky like court-plaster to the touch, not allowing the finger to glide over it as on a polished surface ; — slight adhesions of pleura on both sides ; — both lungs emphysematous ; — right lung a little engorged, but the subject had lain upon this side. Pericardium healthy ; heart of natural consistence, but containing a large quantity of black, coagulated blood.

Abdomen. Remarkable injection of omentum and peritoneal coat of intestines, especially the small ; all the intestines

more dilated, and the stomach larger than common; — that portion of the small intestines which was the most dependent, viz. that contained in the pelvis, was less injected than the rest. Do not imagine that I have here written *less* by mistake for more, for the circumstance is an important one, showing that the color was not owing to a mechanical cause after death.

Interior of Alimentary Canal. Stomach contained a quantity of reddish fluid, but less red than that presently to be noticed, with a few beans. The mucous membrane was of its natural color, thickness and consistence. The mucous membrane of the small intestines, from their commencement to about eighteen inches from their extremity, was of a very peculiar deep red color; — the intestine contained a vast quantity of red fluid, exactly resembling a solution of brick-dust, (to my eye;) and, moreover, in various parts, we saw little patches of white mucus in small spots, adhering, but not very closely, to the membrane beneath; they resembled small, thin portions of boiled rice, but had not the aspect of false membranes; — indeed, they were exactly like the white shreds you see in the last dejections of a man with sporadic cholera. The mucous membrane of these small intestines was of the same peculiar red color; its thickness was a little increased, but its consistence natural; — we found, I think, three beans in this intestine.

I should add, that two or three of the patches of Peyer's glands were a little developed, and that there were a few isolated glands more prominent than usual; — but these were very slightly marked, and I do not think they could either of them have been called morbid. The liquid flowing from these intestines had a somewhat sour smell to me, like that of all undigested vegetable food, which has been vomited, or which we find in the stomach; but some of the gentlemen thought

it peculiarly like sour wine. Louis, however, agreed with me, that it might have been produced by any other substance, which was undergoing decomposition. The mucous membrane of the large intestine was by no means so red, neither was the fluid therein contained; — its consistence, however, was a little less than natural, and its thickness somewhat increased. In this intestine we found, at least, twenty beans undigested. Bladder, liver, spleen, cœliac ganglia, all healthy; —unless liver was rather more red than usual. Aorta contained a great quantity of black blood, liquid; — we found, however, two or three small coagula in its thoracic portion; — the blood was not pitchy; — color of aorta pale, natural. Spinal marrow examined in whole extent, healthy.

I must first notice the co-existence of asthma with emphysema of the lungs; because we learned the two circumstances entirely apart from each other, and therefore without prejudice.

For acute morbid appearances you see we have nothing, except the peculiar appearance of the intestines, chiefly the small, and their contents. I believe the case to be cholera, from the suddenness of the death, the history of the symptoms, and the coincidence of several similar cases in other parts of the city. I know well that it admits of question, but cannot here discuss it.

Shall I leave Paris because the cholera is here? If I do, where shall I go? These are my two important questions. And I can answer neither as yet. Surely, in the present state of affairs, I should regard it as very useless to leave the city, for I do not feel that I am in danger. Should circumstances change, I shall act accordingly. The disease has left Edinburgh, and should it prevail here to such a degree that Andral and Louis think me exposed to real danger, I will leave. In

the mean time, all the students see the disease, and, though I shall not run much after it, my curiosity is excited, and probably I shall see it. I am in full health, have no fears, will lead the most simple and hygienic life, and be assured I will be prudent. Were you on the spot, you would not regard my situation as in any way dangerous ; — of this, I am sure. Should my motions, or any other circumstances require it, I shall write you a duplicate by the Liverpool Packet of the 8th. But I beg and pray of you not to allow yourself a moment's anxiety. I will be prudent, and there is not one chance in five thousand that I shall suffer by the disease.

PARIS, APRIL 1, 1832.

MY DEAR FATHER, —

I lament to tell you that the cholera, which was yet a little doubtful when I last wrote, (three days since,) is now reigning in Paris ; and I must add to a frightful degree. You will learn details from the journals. To this moment there are at least three hundred cases, and a full half already dead. But you are anxious for me ; — you suffer because I still remain here ; — perhaps you even reproach me with an undue inattention to the rights and feelings of my family. A word upon this subject. 1st. What is my actual danger ? I do not deny that the first blow is very strong, in truth frightfully so. But who are the subjects affected ? Up to this moment, *exclusively* the lower classes. I have inquired of many physicians and among them of those whose practice is extensive ; — they have not seen a man in easy circumstances affected ; — the journals say the same. Thus as yet my danger is very slight, though living in the midst of disease. But again, why

need I stay in Paris? In the first place, the disease came upon us so suddenly that we had no time to leave. On Wednesday I first heard of its existence, and already, Sunday, there are three hundred patients. We could not have left the first day, for we were not yet assured; and now what are my circumstances? I am here with perhaps thirty American students, and of them all, I may say with truth, my mind has not been the least occupied with medicine for some years. We are in a city where we may see a disease of the most frightful nature, — which will, in all probability, soon reach our own dear country. We are bound as men and physicians to stay and see this disease; — as a physician you know it and feel it; — as a father you dread it. For myself, I confess, I should be unwilling to return to America, and not have at least made an effort to learn the nature and the best treatment of this destroyer of life. I feel bound to remain with the rest; — for no one thinks, as yet, of leaving. As yet the probability is that it will continue and even increase; — but this is not sure. Should it thus continue, I probably shall not stay here more than one or two weeks; I shall have seen enough of the disease, and if it reigns as now, all clinical instruction will continue to be, as it actually is, interrupted. Wherefore then stay longer. But we may hope that a little calm will soon follow, and that this severe debut will be followed by a rapid march and prompt termination. If so, all my instruction will be continued; I need not lose the remainder of my lessons from Louis, etc. As it is, then, though there is some danger, it is very slight. I shall therefore stay. Again, feeling it to be a duty, and really having my mind greatly interested and excited, I do and shall see the disease. But should the danger become truly great, I shall leave at once for Scotland; and should the disease so continue that, after a fortnight, I cannot

recommence my ordinary studies, I shall likewise leave the city. In the meantime I shall to-day engage lodgings with my two Philadelphia friends, on the other side of the river, in the most healthy part of Paris, where the disease has not yet appeared; — I shall live simply, sleep and rise early, and in every way pursue the most strict hygienic rules.

Thus much for myself, and I hope you are satisfied. I forgot to notice that I am in perfect health, and that, although my mind is necessarily excited, yet I have neither fear, nor anxiety.

Now, for the disease; — one word; — it is death. Truly, at Hotel Dieu, where I have seen fifty and more in a ward, it is almost like walking through an autopsy room; — in many nothing but the act of respiration shows that life still exists. it is truly awful. — As for treatment, nothing is yet decided. I cannot find that any of the thousand different modes essayed is in truth very powerful; — and certainly, whatever be their potency, their effect is almost null. The physicians are in a state of the greatest incertitude, not knowing which way to turn. I cannot pretend to give you any detailed account of symptoms or treatment.

I can only say that the disease is in truth almost a conversion instantaneously from life to death.

In my next, by Liverpool on the 8th, you shall receive something more precise. — My head is now, as one may say, montèe, and I haste for the estafette.

PARIS, APRIL 8, 1832.

MY DEAR FATHER, —

I almost weep to write you again from Paris. It is now the first moment of my life that I have been placed between two

duties, each strong, each binding, and where my great difficulty is to decide which is the most so. But I have decided, as I know, against your wishes. God grant that circumstances may be such that you shall soon accord with me, when the time is passed. A medical man has duties ; — I am a boy in medicine ; — granted ; — but I am like the other Americans here about me. An opportunity is offered us to study a disease, which will probably visit our hitherto untouched country. Were the disease about you, would you fly ? You could not, for the public would look to you ; — you would not, for your sense of duty would prevent you. I am in a measure in the same condition. From a week's accurate, patient, laborious study of the disease, before and after death, as to its nature and the effect of treatment upon it, I am now assured that there is much to be learned and much that is therapeutically important. I doubt whether our profession will ever be able to divest it of its greatest horrors ; — this I do not hope for ; — for I see no ground for such hope. But I do believe that an exact study of the latter part of this disease, after the reaction is established, and observation of the effects of treatment upon it, may lead to much that is useful. Persuaded of this as I am, I feel it a duty thus to study. If I can be the means of directing the attention of our physicians to certain points, an attention to which will enable them to save one in twenty of those affected, and that one would have died without it, — what is my duty ? to stay and study. As an individual I do not hesitate thus to answer ; — but when I remember you, my dear father, I tremble that I have thus answered.

I am with Andral. During five days we have had eleven very exact autopsies ; with which, with the whole history of the cases, beside numerous others, some dead, some living, now to die, some in fact dying now around me, (for I write in the

ward of la Pitiè,) some I am happy to add in a fair way to recovery, I will acquaint you hereafter. But I will write no details now ; — I purposely avoid them.

I will but add two circumstances which shall, or ought to serve to diminish your anxiety. — 1st. As yet, although the disease increases in a truly awful manner, there are but few cases in the upper classes.

2d. Of those affected with the disease, there are very few of my age, or near it. I must have seen five hundred patients, at least, and of those not ten under thirty. I cannot indeed recall five ; — and not one have I seen in the dissecting-room.

The only young man under Andral's care now lies in the bed behind me, convalescent. Yet, there is some danger ; it is in vain to deny it ; but it is not great. And I am happy to add that, since the appearance of the cholera, I have been in a little more perfect health than before, though that had seemed impossible. Most of my friends have had a little diarrhœa, or cramps, etc. ; I not any. Not one of my acquaintance has been seriously sick. I live as usual, but with excessive care. I work harder than ever in my life before. A month hence, I will send you the results on paper ; — but it will be a year before I can show you the full results ; for I am learning more on the pathology of mucous membranes (intestinal and gastric) than ever before. But of this by-and-by. I have determined to send you no details as yet ; — but I keep a daily record for you, which will be long, and probably, unless the disease becomes such, that I esteem myself in essential danger, I shall send you one hundred detailed observations, (of which I have already thirty,) and forty or fifty of the most thorough and accurate autopsies that you ever read. From these, when collected, I propose to draw what conclusions I can as to the nature and treatment of the disease, in

making a nice analysis and synthesis of all the circumstances. I flatter myself that I can do this in such a manner as will be truly useful. I shall do it in England, taking my papers with me, and devoting my first one or two weeks there to this work. I would prefer vastly to have sent you one of the half dozen sheets I have written this day; but it has been my determination to avoid advancing an idea till all is done. Not a single fact has yet occurred to show that the disease is contagious; *au contraire;* — not a physician, nor interne, nor student of the hospital has been affected. A week or two, my dear father, and you will hear from me in England.

Havre, April 25, 1832.

On my way to London, as you see, my dear father, and perhaps will wonder why; surely, when I last wrote you, I expected to stay in Paris a fortnight longer. I have left because the cholera has almost ceased, not because it had increased in severity. I have left for want of cases to study. In very truth during the last three days, in a service of fifty beds under Louis, we had not a single new case of any severity; and he advised me, as I was beginning to suffer from fatigue, (for never in my life have I worked so laboriously,) to leave, contented with the sixty or seventy cases and more than thirty autopsies. In London, as you know, the disease is about extinct, (seven cases a day). In Paris it still exists; I saw cases and deaths till the very last moment, but much fewer and much less severe. You have no conception of the mortality; and allow me, your son and pupil, to say to my father and master, you have no conception of the disease, and will not have till you have seen it. The French-

men even, who look upon death and dying with as much sang froid as any people, were thrown off their balance. Never shall I forget Louis's altered face and aspect for the first week; — emaciated, wan, wretched, like one who had received a blow from which he had not recovered. There are few men living so familiar with death, or the dead.

LIVERPOOL, JUNE 30, 1832.

MY DEAR FATHER, —

I received last night with great pleasure yours of May 19th — 25th. The last releases me from all apprehension as to your judgment upon my stay in Paris. I rejoice that you view it as I do. A word on cholera, and then I will dismiss it. Not a day passes, that I do not picture to myself the possibility of its actual, or future existence on our own side of the Atlantic. Of course I keep myself always ready to see if there be any truth in the reports of the new modes of treatment of it. In London, as I told you, I saw a few cases with Dr. Stevens, but none of them were at all satisfactory, for various reasons which you shall have in detail in your own study, or in mine, by-and-by. In passing through Yorkshire, where the disease is prevailing, I inquired, whenever I had an opportunity, of the success of the saline injections. At York I was enabled to visit the cholera-hospital, and saw three or four patients, among whom was a boy aged seven or eight, who had been thus treated and was convalescent. How bad his case had been, I know not. They assured me it was very severe; but I have seen so many mistakes upon this head, that I feel inclined to question the authority of those who have not seen more than fifteen or twenty cases, when I know that, even after an accurate study of hundreds, the prognosis, or, in

other words, the estimation of the real severity of a case, is very difficult. Be that as it may, I am anxious and willing to hope that this boy recovered through the agency of the saline treatment. I next saw a young woman, aged twenty-two, who had been three times injected, and whose case was accurately detailed; whereby it was clearly shown that she was pulseless, that blood could not be obtained at the debut, and, from the notes, I cannot doubt that it was a severe case. Well, what was her present state? You shall hear. They thought she would pretty certainly recover;—I would bet ten guineas she is dead at this moment. Face flushed; skin every where hot; lips and tongue getting dry and brown; respiration much embarrassed; a sort of fainting or sighing; pulse one hundred and twenty, hard; some disposition to drowsiness, fell asleep while we talked to her; respiratory murmur loud and vesicular in front; could not be raised to examine her behind, where I suspect we should have found crepitous râle. Compare this,* if you will, with the cases of two women under Andral, infirmières of the hospital, in St. Rosaire, Nos. 20 and 22; their result leads me to anticipate death here.

Again, in Leeds, I inquired if this treatment had succeeded, and was answered in the negative. My conclusion, as far as I am able to form one, is, that this injection undoubtedly produces a temporary excitement, but that, as yet, we have no proof that it arrests the disease. It does not strike at the cause; and how can we suppose that it should? This chemical rage enrages me. I shall see medical gentlemen here to-morrow, and learn what has been their experience. You shall have it by the next packet.

* The reference here is to the writer's "Cases of Cholera in Paris," which he had sent me a month before this letter.

* * * * I have been nearly a fortnight reaching this place on my way to Edinburgh, and I would that every fortnight of my life had been as well employed. At Oxford we staid three days to see the great men collected together at the British Association, in imitation of the German Society of Naturalists. Of this, more, by-and-by. Thence, through Leamington Warwick, Kenilworth, etc., to Birmingham, in each of which places I saw and learned much that was new to me. Through Derbyshire, Derby, Matlock, Chatsworth, Castleton into Yorkshire, Sheffield. Here, S.— and I parted, much to our mutual regret. He is a fine fellow. I went to York, and to give you an idea of the hospitality, which I everywhere experience, I will draw a little sketch of my Yorkshire expedition.

Arrived at the capital of this rich and extensive county, I called on Mr. K. with Mr. W.'s letter. He and his wife received me with kindness; I spent the evening and breakfasted with them the next day. He pointed out to me all that was interesting to a stranger, and introduced me to Mr. Phillips, the curator of their Museum. This gentleman gave me what I may call a lecture of nearly an hour upon the outlines of geology, of which they have a very fine cabinet, so arranged as to speak itself of the beauty and order of the system; and, I assure you, I would travel over twice the distance for the sake of gaining the clear view, which this gentleman gave me of this interesting subject. I felt quite indebted to him; he has raised a new cabinet in my mind, and so raised it, that whatever accident throws in my way, I may easily attach there. Not satisfied with this politeness, he gave me a letter to the curator at Leeds, Mr. Hey, grandson of the celebrated Hey. Here I added to my knowledge, which was so newly acquired, and was treated by this gentleman more like

an old friend, whom he was glad to see again, than as an entire stranger. Had you seen us together, and listened to our conversation the next day, you would not have supposed our acquaintance of only twenty-four hours date. While walking with this gentleman, he happened accidentally to mention the name of Dr. Teale, as a friend of his. I at once asked if it was the neuralgia Dr. Teale. He said, yes, and I begged to see him. He asked him to tea with us; we had an hour or two of free pathological conversation. Dr. Teale promised to show me some interesting cases and morbid specimens, if I would stay and dine with him the next day. Though anxious to get on, I consented; and glad am I that I did. Dr. Teale invited two medical gentlemen to meet me, brother professors in their new college in Leeds, and I spent from four to eleven, P. M. most agreeably in their society. I have not talked so much pathology for a long time. Dr. Teale is a very sensible, enthusiastic man; not inclined to theory; apparently a good and vigorous observer; industrious and well informed; weighs and values well his evidence before he admits truth; in fine, a man in whom I should place confidence. You see I passed a pleasant evening. * * * * I do not regret passing through Leeds; my mind worked three day's worth, while there. I learned some new things and had a great, general review of much pathological ground. We walked fast, turned into many pleasant lanes and bye-paths, and midnight came before I suspected it.

All this from Mr. W.'s letter to Mr. K. Thus it is in England; and Dr. Teale begged me to come again. How boundless is their hospitality.

Of my papers on cholera; of course I am anxious to know if you will publish them. You will see that I had to restrain

a strong desire to enter more fully into the pathology of the disease. But I am young; and what I have condemned in others who are older, would have been doubly guilty in myself.

Mr. F. calls, and I must close to go out with him. Hospitality again, hospitality! Quel peuple; je vante que nous sommes d' Angleterre. J'aime ce pays, comme notre mère, d'ou vient notre bonheur. Good bye, my dear father.

Your son, J. J.

EDINBURGH, JULY 10, 1832.

MY DEAR FATHER, —

If you are not heartily tired of cholera, I must beg you to read what I have seen in this city. I was informed on my arrival, that the disease had re-appeared here, and with increased force; yet twenty cases a day is the outside. On the following morning, Dr. Alison introduced me to the Cholera Hospital, where I recognised the old and familiar, but appalling features of the monster, I had so much observed in Paris. The most interesting object of inquiry was, of course, as to the success of the saline injection; — and the following is, in few words, the sum of information I have been able to obtain.

It is derived from several physicians of rank here, and three or four young men.

1. They employ this remedy only in the bad cases; viz. when the system is prostrated; pulseless, blue, cold, &c.; collapse.

2. In such cases the effect is to produce excitement of the circulation, &c.

3. After this excitement is produced, it is sometimes of short duration, and recourse is had a second, or third time to the injection.

4. This excitement is sometimes followed by a second collapse, during which the patients die.

5. It is again, and not unfrequently, from their statements I should say very often, followed by too great a re-action, and the cases close with cerebral symptoms and death, unless venesection, leeches, &c. prove successful.

6. The effect of this injection seems to be, not to cure the disease of itself, for, first, a majority of those injected die ; second, those who have survived, most, if not all, have taken calomel and opium in full doses ; third, the cerebral affection just noticed, almost always, or very often, succeeds the injection, and proves fatal, if it be not immediately overcome by antiphlogistic treatment.

7. So far as the injection is proved to be useful, it seems to be by producing reaction, and thus allowing time for the employment of alteratives ; or bringing on the stage of excitement, which, though very dangerous, is sometimes to be overcome by antiphlogistic treatment. This last, which is the result of the observation of these gentlemen, coincides exactly with the opinion I expressed to you in a letter from Liverpool. Each of these gentlemen assured me, that he did not doubt having seen a *few* cases recover under this treatment, followed, as I have before said, by antiphlogistics and alteratives, which would have proved fatal without the injections ; because then the last could not have been employed.

8. The injection employed is composed as follows ; ℞. Sodæ Muriat. ʒ ij, Sodæ Bicarbonat. ϑ ij, Aquæ octant : v, — misce. This is used at the temperature of 112° — 115° ; — its heat is preserved during the operation, by allowing the vessel containing it to stand in another containing hot water. The injection has been continued until the object was obtained ; viz. return of pulse, warmth and natural color. The operation is performed

with a small syringe, and quite slowly; for example, ten or fifteen minutes, to five or eight pounds.

9. After the injection, the following is given, varying pro re natâ; ℞. Hydr. Submur. gr. iv, Op. gr. i, — misce, every two hours. I am not sure as to quantities and times, but the object is to salivate as quickly as possible, and for this purpose mercurial frictions are added. I have said nothing of vapor baths, hot cloths, &c., which of course, in some form, are constantly employed.

10. After all this, they watch for reaction, and at the first symptom of excess, bleed locally or generally.

11. One woman is well, and now about, who had some time since fifty-one pounds of saline fluid injected, besides a solution of quinine and morphia. There were, of course, several injections in this case.

Thus I have given you, in a hurried manner, (for my time is much engaged,) what I believe to be the essentials of what I could obtain from these gentlemen. Yet once more.

12. Dr. G. insisted very strongly upon the great temporary relief to suffering, even if the cases afterwards proved fatal; saying, he should deem himself culpable for neglecting it, even if this were the only ground. I shall next give you what I myself have seen, continuing a daily report till I send my letter.

[Here follows the records of three cases treated by injections, which are omitted, as not interesting at the present day.]

July 12. — * * * * I dined to day with Dr. S. —, he tells me he has used the injection in eight successive cases; they all were fatal. Dr. C. says he has seen it tried a good deal, but is by no means sure of having seen it once successful.

The truth is, that its immediate effects are so striking, and there is often in cholera such a false convalescence, that it is

really very difficult to prevent one's mind from receiving an impression in favor of this remedy. We see the patient revive; good pulse, good countenance; every thing promises well for twenty-four or forty-eight hours, and then death soon follows. I have already seen three cases at Edinburgh, which were regarded as nearly convalescent, or quite safe; — one of them is dead, and I am almost confident, from present appearances, the other two will die. I forgot to mention the testimony of another gentleman, with whom I have conversed, against the injection; — Dr. B.; as also Dr. T., by whose learning and familiarity with medical literature, *late* and old, in such an elderly gentleman, I have been as much surprised, as entertained and instructed.

* * * * Let me suggest one measure to be adopted in our own dear city, in case the disease reaches it; — and we have reports that it is already at Quebec, though God forbid it be true. Let each of our physicians take a certain part of the town under his charge; — let it be his duty, not only to visit all the poor when they are sick, but *twice a day*, while the disease remains; let him call at each house, and inquire if any be sick, *i. e.*, have lost their appetite, have diarrhœa, or any premonitory symptoms; in this way you will get at the disease early among the poor. For the rich, there is no danger; they will call you from your beds often enough, with false alarms and vain fears. If you wait for the poor to come to you, it will be too late; you must, therefore, go to them; and the labor will not be great, when divided among so many. I know of no means so likely to lessen the mortality.

DUBLIN, AUGUST 19, 1832.

MY DEAR FATHER, —

I would to God I knew how it is with you at this moment. When awake, I do not allow myself to think much of cholera in America, and never to fancy that my friends can be touched by it; — but in sleep, it occurs in my dreams, and they are such as sometimes alarm me. I must await the end. I have not received any letters from you for some time; — as I have been wandering and uncertain, I directed them to be detained at London, after I left Edinburgh, and this circumstance will hurry me back to London. I am already repaid for coming to this city, by a few hours study yesterday, at the museum of pathological anatomy, at the college of surgeons. I have added to the stores of my knowledge, memory and note-books upon this subject. It is my intention, so to have seen every thing in the *morbid way*, that you cannot find me at fault on the most close examination. I have already seen much, that from books I had longed for, and only regret that you are not at my side, that we might burn together, as we looked upon the riches of the science we love. Do not imagine that I am going to allow myself to become a mere pathological anatomist, instead of a pathologist in the more liberal sense of the word. Remember, though I now write mainly of specimens, preparations and paintings, that from Paris I wrote much of symptomatology, aye, and studied it much, too. That I do not much expect in England; — it is almost impossible. I may see practice, you will say; I will, but I expect fully, very often to be much in doubt as to the nature of the case, in which the practice is exercised.

I was very much delighted with the Giant's Causeway, of which I would give you a description, but that in print you will find so many superior to any thing I can give you. The

counties of Antrim, Downe, Derry, &c., in the north of Ireland, through which I rode, are beautifully cultivated; and in them are some of the neatest, best built villages I have ever seen, inhabited by people whose dress, countenance and whole aspect, indicate comfort and prosperity. The mud hovel is there scarcely to be seen. Indeed, to my eye, these little towns are superior, most decidedly, to most of those I passed through in Scotland, either north of Edinburgh, or west of it. Such an appearance of prosperity and comfort in Ireland, was to me as surprising as it was grateful; for I don't forget my Tracy blood; — but I am told, that at the south it is quite different; and if I can possibly get three or four days, I shall ride through it to see for myself. I am here struck, as I was in Switzerland, with the difference between the protestant and catholic counties; — the first, prosperous, the last wretched; in the first, rich fields and good roads, indicating that time was precious and well-spent also; — the last uncultivated, or poorly so, with bad roads; a token of the very opposite. I cannot forget having made the same remarks some years since when travelling from New-England into catholic Canada.

The anatomical department at the College Surgical Museum, is so arranged here, and with so excellent a catalogue, that with a little study I may fix some very important general principles, illustrated by preparations, on the subject of comparative anatomy of the internal organs. I shall devote as much time as possible to this, after I have finished the morbid anatomy; — every specimen of which I examine, taking a note of all that is new or peculiar.

The finest institution I have yet seen in Europe, is the Lying-in-Hospital, in this city; — it is very extensive, extremely neat and comfortable, almost vying with the Massachusetts General Hospital; and I should imagine more truly useful than

almost any other, as affording certain and positive relief to sufferings, which, uncomplicated with cold and hardship, are sufficiently severe. I trust we shall soon have a similar institution. I shall endeavor to procure what I can of the regulations and reports of this, so far as any have been published. The citizens, especially the professional men, are extremely, and very justly proud of this, their favorite establishment.

As to cholera, the experience of the gentlemen I have conversed with here is the same as elsewhere, viz.; that art is vain against it. I have seen one new thing upon this subject; — a patient of Mr. Cusack's, in whom mortification of half of both feet followed the disease. He has seen a second case of the same. They have suffered here most sadly, but the cases are now reduced to six or eight a day. * * * *

Aug. 21. Still in Dublin, my dear father; neither do I regret it. I have picked up a good deal at the museum, — having examined each specimen of morbid anatomy; and a fine collection it is, though there are defects.

The collection of comparative anatomy of the internal organs is so admirably arranged, catalogued, described and labelled, that I cannot resist the opportunity to study the subject by means of it, and with text book in hand, am now employed in examining with care these specimens. My thoughts are now on tongues and stomachs, instead of diseased hearts, &c. I can learn more from this than from J. Hunter's even, because there is neither catalogue nor label, there. — Again, this will prepare me for the other.

London, September 14, 1832.

I have to-day finished my study of the museum at Guy's, which has cost me many hours. It is certainly the finest I

have seen in Europe, and does great honor to Dr. Hodgkin; who, by-the-by, is one of the deepest men in reading and observation that I have seen. * * * *

London, September 22, 1832.

MY DEAR FATHER, —

I received a few days since yours of August 20, — Cholera had just commenced; — *slowly*; — how has it been since? I anxiously await the arrival of papers to inform me. It is useless to speculate upon it; I cannot but hope and believe that the precautions and general character of the Bostonians (than whom I have seen no people, at home or abroad, more marked for solidity of judgment and good common sense) will prevent it from being excessively severe. * * * *

* * * * My purposed occupation for the week, the examination of Hunter's museum, has been interrupted by a most melancholy accident. * * * *

It is truly grievous that there is no catalogue of this superb collection, — I would give more for one during the next fortnight than for any book I know of. — I can understand the general plan, and many of the individual specimens; — the more from having studied as I did at Dublin. The more, too, I could have said, had I studied as I ought to have done at the Garden of Plants. And when I can understand the peculiar object of an individual specimen, it is so beautiful and so demonstrative, so speaks of its great designer, that I am only the more vexed, that the greater part are as a dead letter. You can judge of the immense disadvantages, under which I must study it, and the comparatively little knowledge I can obtain from it, when I describe to you in what manner a catalogue is now be-

ing made by Mr. Owen. He has devoted himself to this task for the last year and a half, and really his zeal and industry are quite proverbial.

Well, in this year and a half he has advanced about four hundred specimens; just about beginning with the organs of digestion now. In order to do this, he tells me he has already dissected more than two hundred species of animals. His only resources are a very meagre catalogue of Hunter's, which is so mingled with a false and pretended one by ——— as to render its authority very doubtful. When he does not know a specimen, therefore, he begins to dissect all the animals from which he has reason, from his previous knowledge or reading, to suspect that it was taken. He tells me he has sometimes dissected thirty animals to ascertain a single specimen. By so doing he is constantly adding to the riches of the museum; but the fact that this is necessary will show you how lamentably limited must be the advantages I can enjoy in this study. Yet, as I tell you, I find myself able to recognise many things, which would have been a perfect secret to me, but for my study at Dublin. Again, that study teaches me how vastly superior is this museum of Hunter's, though much less useful to the student from the want of a catalogue. * * * *

* * * * I have just come from Bartholomew's hospital, where I have seen Lawrence, Earle, &c., and the museum, which is small but neat and instructive, — mostly devoted to surgical diseases. In it is a specimen of diseased lung, similar to one at Guy's, in which emphysema exists to a very marked degree, with tubercles.

I think I wrote you of a puzzling case in Louis's ward last spring, where I could not come to a diagnosis of anything but a combination of these two affections. These two specimens have been very interesting to me, as proving the coincidence of the two things, and rendering the diagnosis probable.

London, September 28, 1832.

Would you were here, my dear father, to enjoy with me the study of John Hunter's works, and to kindle with me in my admiration of his genius; the elevation and extent of which I know not even now; nor does any man living, though my conceptions of his vast and comprehensive mind have been greatly elevated within the last fortnight. His museum is in telligible to no one in its full extent. The materials there collected and arranged, are often indicative of peculiar ideas, which are lost to the world for want of their great interpreter. This is especially true, as I suspect, upon the subject of generation, on which the museum is peculiarly rich in the number and variety of its preparations. Digestion, respiration and generation have been the most interesting departments to me; and beautiful indeed is the endless variety of means to obtain these several ends, varying as they always do in accordance with the nature and circumstances of the individual cases. The collection at Dublin, on the subject of circulation, is even better than that of Hunter's, so that I did not meet with so much that was new to me on that score. While visiting the museum, I have been reading those valuable papers in Hunter's work on the animal economy, which Dr. Hodgkin, among his numerous other kindnesses, procured for me. Will you believe it, in London, the theatre of this great man's life, I found considerable difficulty in procuring this work. * * * *

* * * * Sept. 29. Let me give you an account of some new ideas of Dr. Carswell's upon the seat of tubercles, which he has been unfolding and illustrating to me this morning. I am anxious to keep his arguments in mind, and cannot do better than write them you; — the present exercise will impress them upon my mind, and the sheet will serve me or notes at my return.

1. He believes that tuberculous matter may be deposited in any tissue; — we find it in all organs, bones, brains, glands, &c.

2. He believes again that, although it may be and often is deposited in the cellular tissue, (circumscribed cavities,) yet its preference is for free surfaces, or mucous membranes.

The first point we shall all agree upon; the last is new to me and excites my doubts; especially, with respect to the lungs, I had always supposed tuberculous matter to be deposited in the cellular tissue in the vast majority of cases, although I have occasionally seen it upon the mucous surface of the bronchia.

He thinks, on the contrary, that its most common seat in the lungs is upon the mucous membrane. His arguments are as follows. —

First, from comparative anatomy. Cow; — this animal, as you know, dies very often of phthisis. In their lungs the bronchia are filled with tuberculous matter; — of this he has a most splendid drawing, showing this deposit from one of the bronchi into many of the ramifications of the bronchia. When an incision of the substance of the organ was made, round tuberculous masses were seen upon the incised surface, which I should have mistaken for tumors, or tubercles in the parenchyma, but that he proved to me in others upon the same specimen, that these were but transverse sections of the bronchia, containing tuberculous matter. Here, as in other cases that I shall relate, he arrived at this knowledge by commencing his dissection at the bronchi and tracing their divisions, instead of incising the lung only in various directions. *Second.* In the human lung by a very nice dissection, in the manner just noticed, he has been able to trace the tuberculous matter in the bronchia to the vesicles, always on a free mucous surface. Of this he showed me one drawing quite illustrative

of his opinion, and assures me that he has very often been able to demonstrate it. Remember, he does not deny that tubercles are also formed in the substance; he only wishes to show that this, instead of the usual, is the less frequent seat of it. The little central point in the tubercle, which it has been so difficult to account for, he conceives to confirm this notion; for it is easily explained upon the supposition that the tube was not entirely filled, in which case a transverse section of it would present a small orifice in the centre. So much for evidence derived from the lungs; now for that to be derived from other parts. If he can show that there is a great tendency to tuberculous deposit upon other mucous secretory surfaces, he claims an analogical argument in his favor. 1. He refers to the follicles of intestines in phthisis, which, previous to ulceration, are filled with tuberculous matter. 2. He shows *very many* specimens of tuberculous deposit upon the free surface of the fallopian tubes and uterus, *without any such deposit* in their substance. He also assured me of many more in the hepatic ducts, vas deferens, &c.; — all these of the human subject. 3. He showed a very remarkable specimen in the liver of a rabbit. It is well known that these animals can be rendered tuberculous (*i. e.* in the liver) at will, by exposure to damp, bad food, &c. This organ then presents at its surface what have always been taken for round, defined tubercles. Dr. Carswell on a careful dissection found this to be an error; and he traced these masses by one continuous line of tuberculous matter through the smallest to the hepatic duct, and into the intestine, even; all of which is most beautifully displayed in his drawing. This is a very remarkable discovery most assuredly. (I will just note here the existence of two other drawings upon the same paper, illustrating the disappearance of the tuberculous matter on the restoration of the rabbit to a proper

diet, &c., which are yet more interesting; but as not connected with the present point, we will talk of again). In the testicle of a goat, which he showed us, the vasa seminifera were filled with tuberculous matter. The animal, having enjoyed a large seraglio for a long time, was entirely shut out from the females, and one of the testes became atrophied, the other diseased as above.

It is upon these arguments that he rests his opinion. I will not comment upon them, but shall observe, if they be true. Dr. Carswell is about to publish a work upon morbid anatomy; elementary, with plates, and not very expensive. I shall send you two copies of his conspectus, begging that you will get P. to advertise the work in his journal, and I beg you to procure what subscribers you can. He has two thousand drawings, as far superior to any thing of the sort I have ever seen, and I have examined the whole of them, as Raphael to a modern French artiste.

London, October 1, 1832.

* * * * I dined with Dr. M. Hall, and was indebted to him for one of the grandest spectacles that human eye can behold. I witnessed the circulation in the web of a frog, under a microscope of one hundred magnifying power. I know not whether you have ever seen this or not; if not, you have no conception of its beauty. With what ideas does it fill the mind! — the whole animal world thus teeming with life and motion, and this motion in the most defined and regular vessels, and regulated by unvarying laws. The artery is distinct, constantly dividing into smaller arteries, until it is at last separated into two capillary vessels. These are always of the same size, and thus differ from the arteries in this respect.

They run in every direction and at last terminate in veins, between which and themselves, as to form and size, there is again the same distinction. In the second place, the blood is seen to move with different velocities in each of these three order of vessels. As it courses its way along the artery, rapid as lightning, you cannot distinguish the globules; these become quite apparent in the capillaries, and yet more so, *I think*, in the veins; at any rate, you see them very distinctly in these two last series of vessels, whereas, in the arteries, they succeed each other so rapidly, as to form a continued line to the eye. It is a most glorious sight, and most ennobling to see the blood thus actively pursuing its course till it reaches the great and common reservoir, the capillaries; there delaying its progress in order that the formative vessels may make what use of it they will; and then slowly making its way back to the organs, where it is to be replenished with what it has lost, or give up what it has acquired. When the web was wet with alcohol, and inflammation had commenced, the capillary circulation stopped entirely after a while; the blood was stagnant in these vessels, while it continued to flow in the others. Upon this, (which is a phenomenon I know to be true, for I saw it,) Dr. Hall forms an hypothesis concerning inflammation.

Paris, November 1, 1832.

* * * * The glory of the week has been Andral's introductory lecture on diseases of the brain. It was the most eloquent thing I ever heard, one speech of Mr. Webster's and a sermon or two of Dr. Channing's excepted. I could scarcely restrain myself, it was so grand and beautiful. What powers of mind and vastness of comprehension has this man! What

gave me peculiar pleasure also, he declared boldly and freely for the numerical method, saying, it was the only mode of advancing the science of pathology.

PARIS, NOVEMBER 13, 1832.

* * * * What Louis has given us is positive, and it is a matter of astonishment to see to what beautiful and unexpected results his mode of studying has led him. Will you have an example, now before my eyes? I could give many, but will limit myself to the following. One of his *laws*, drawn from the study of his facts, is, that in the *adult* subject, whenever tubercles exist in any part of the body, they of necessity exist also in the lungs. A second *law* is, that every chronic peritonitis, chronic from its debut, is tuberculous; *i. e.* he has never seen one that was not so. Ergo, if one discovers by symptoms, during life, a chronic peritonitis, one may be sure that the patient is tuberculous, and that he has a tuberculous affection of the lungs; and he may safely diagnosticate this, although there may be no symptoms whatever of pulmonary disease. I must have written you last year of one case, in which I saw him make the diagnosis correctly. A second is now in the ward, of which I will give you the details on my return, as I have taken the observation at Louis's request. To me the case is interesting in another view, as being one of those, of which I wrote you in my last, where I had observed the form of bronchial expiration then alluded to.

PARIS, NOVEMBER 24, 1832.

* * * * But the most interesting circumstances of the last two or three weeks are the lectures of Andral upon diseases of the brain, and the unparalleled variety and number of these diseases, that we have seen *through their whole course and after*, in Louis's wards. It is really a little remarkable ; for I came back from London wishing to attend to this subject, and every thing has favored it. Next week, B— and myself commence a private course upon this subject at Salpêtrière, which will yet multiply our chances for obtaining information upon it. We had yesterday a very perfect case of ramollissement of the left lobe of the cerebrum, which had caused hemiplegia of the right side ; two days before a cancerous tumor in the cerebellum, with ramollissement about it. I have already told you of two cases of tubercles in brain ; besides these, three cases of cerebral disturbance, in which no morbid affection of the brain was discovered after death.

Nov. 26. — To the cases just mentioned, when I was interrupted on the 24th, we have this morning unfortunately been obliged to add another. A woman, who, three or four days after her accouchement lost her child, entered the hospital ; was delirious in evening and during night, and for next forty-eight hours had loss of consciousness, repeated epileptiform convulsions, paralysis, not complete, of left side of body, and raideur, or rigid contraction of right arm. These symptoms continuing, — death. Autopsy : — brain in a normal state ; no organic derangement. Morbid anatomy, then, does not tell us all ; far, far from it ; and, I may add, that if I have learned better to appreciate what this science can teach us, by a more extended observation than it was possible for me to enjoy in America, I have not the less learned that it is by no means the only

mode in which we are to study the intricacies of pathology. How much chemistry is to yield, how much a more intimate knowledge of physiology, how much a more exact appreciation of the various influences of the different physical agents upon us, it remains to be decided. This last subject interests me much at this moment, as I am now reading Edward's work on the influence of the physical agents upon life; one of the most remarkable works I ever read, both on account of the subject, and the peculiarly vigorous and philosophical mind of the author. I hope to see him soon; Dr. Bostock gave me a letter to him. But our poor pathology and yet worse therapeutics; — shall we ever get to a solid bottom? shall we ever have fixed laws? shall we ever *know*, or must we be ever doomed to suspect, to presume? Is *perhaps* to be our qualifying word forever and for aye? Must we forever be obliged to hang our heads, when the chemist and the natural philosopher ask us for our laws and principles? Must we ever blush to see the book of the naturalist, his orders and his genera, with their *characteristics invariable*, while we can point to nothing equivalent? Our study is that of nature, as well as theirs; the same cause acting upon the same materials must ever produce the same effect with us, as with them. But they know *all their elements*. Do we? In their calculation no figure need be left out. Is it so with us? If honest, must we not confess that we are ignorant of many circumstances, which must, however, vary the result? If honest, must we not acknowledge that, even in the natural history of disease, there is much very *doubtful*, which is received as sure? And in therapeutics, is it better yet, or worse?

Have we judged, have we deduced our results, especially in this last science, from *all*, or from a *selection* of facts? Do we *know*, for example, in how many cases such a treatment

fails for the one time it succeeds? Do we know how large a proportion of cases would get well without any treatment, compared with those which recover under it? Do not imagine, my dear father, that I am becoming a sceptic in medicine;—it is not quite so bad as that;—I shall ever believe *at least* that the rules of hygeia must be and are useful, and that he only can well understand and value them, who has well studied pathology. Indeed, I may add that, to a certain extent, I have seen demonstrated the actual benefit of certain modes of treatment in acute diseases. But is this benefit immense? When life is threatened, do we very often save it? When a disease is destined by *nature* to be long, do we often very materially diminish it? I doubt not, that we do sometimes and under certain circumstances. But on the other hand, I must acknowledge that, what I have seen here of disease and its issues, has rather inclined me to believe that *I individually* overvalued the utility of certain modes of treatment in America. You cannot conceive of my impatience to get home and see again, what I once saw, and what a second time I shall look at with new eyes. I have been led into these reflections (and I hope you will read them as they are, passing, conflicting *doubts*, which must ever arise in the mind of a man on every subject, upon which he has not determined facts, as the basis of his opinion) by the study of, or rather the *look* I have been taking at physics and chemistry and natural history.

I have been led into them too, by the study of these darkest of all dark subjects, diseases of the brain. There I look in vain for a constant and fixed cause of a constant and fixed effect, *so far as our senses and present modes of exploration enable us to appreciate the causes and the effects.* There, again, even after we *seem* to have fixed upon some almost characteristic distinctions, which will translate with compara-

tive certainty the causes, I am condemned to read that having thus discovered the cause, we can go no further. There is a ramollissement, there is a tumor; but we can remove neither. There is a hæmorrhage; but some facts, of *which I have been eye-witness*, teach me that, even without treatment, these sometimes advance toward a certain degree of *cure*, and the symptoms thereof disappear to a certain extent; and beyond that, the art of man can never, or almost never go: the lesion remains; the individual is maimed for life, and that life is not worth the having. Is it not true, my dear father? Your life, which has been so long and so extensively useful, has it not been so more through hygienic, prophylactic, than through strictly therapeutic means.

Think for a moment of the diseases, which prove fatal to the life of man in our country. Probably nearly a fourth die of tubercles; certainly a fourth, if we except those who die of old age. After this fourth how large a proportion dies of some confessedly incurable organic disease.

Will you know to what results reflections of this sort have driven me? I am brought to think that the medical man's life may be *most usefully* spent in the collection of facts, which shall throw light upon the causes, internal and external, (I mean those which exist within and around the individual,) producing or leading to organic diseases, tubercles and the rest. How can this be done and what will be its effects? Let me say a word upon each of these heads. It can be done, well done, scientifically done, in one way only. Numerous histories of the lives of individuals, from the uterus to the grave, must be carefully collected. Their weight, and size, and parentage; their comparative growth and development; the care of their infancy; length of time at the breast, &c.; their mode of physical education as to diet and exercise; and

their diseases, all in detail; their idiosyncrasies in every particular; and a host of things, which appertain to every individual and influence his physical existence.

This cannot be done by one man; — there must be a society, — a body of men, all impressed with a sense of its importance, all feeling and knowing that without it we *cannot* reach truth. Reflect for a moment upon the delights of such an association. Suppose there were ten of us in Boston and its environs, who should thus associate and observe carefully during ten years, or twenty? We begin with the children, who are born under our care; each of us keeps a record of all thus belonging to him; these records are to be copied by a clerk into a book, which is the property of the society. Each month we meet together; the subject of the evening is the additional material during the past month, which appears upon the pages of our book. What would be the advantages of such a society? Call it utopian, call it ideal, if you will; I'll not deny it. I fear it may, nay, perhaps, must be so; but again I ask, what might be the advantages of such a society?

1. We meet, so many *students*, so many practitioners, all inspired with the holy desire to discover truth and to turn it to advantage. We meet, each presenting to the whole what has occurred to him, receiving the light and aid which the combined efforts of the whole can afford. Every individual case, then, of disease will be more fully considered and have an opportunity of *being better treated*. 2. We create a school of *accurate observers*, and the good effects of this alone are endless. 3. We amass materials, from which may be deduced a good and connected general history of the most unknown diseases, those of children, not painted by the imagination, but rigorously deduced from facts. 4. We collect in time a vast

quantity of material, which shall go to prove *incontestibly* some of the most important points of hygiene. We show, for example, that children nursed only ten months have only half the chance for a continuance of life to the adult age that those have, who are nursed sixteen or eighteen. We show that of two families, equally disposed to phthisis, in one, who from infancy, led an inactive life, &c., all are dead at an early age; while in the other, where means were taken to invigorate the system, all live, &c.

We will suppose that these, or similar and equally important truths, could be rigorously deduced from the facts we had collected; that we could prove them, and show our proof to the world, as the public treasurer renders his annual account to the public, by figures and columns not to be mistaken. 5. Again, in thus learning what description of individuals and what sort of life predisposed to such and such diseases, we may arrive at an earlier diagnosis and thus be able to procrastinate, if we cannot prevent the occurrence of disease. But the advantage, both to the parties and to the public, which might result from such a course are too obvious.

I have shown how I think this may be done and what would be *some* of its effects; but there is yet another and a more important one in my mind than any, which would be produced immediately upon and through the physician. I speak of the effect upon the public mind,—the influence it would have upon the education of youth and the public hygiene in general. What mother would dare tear her child from the breast at eight or ten months, after we had shown her and made it accepted truth, that one of two children thus treated would meet with a premature death? How many parents would be stimulated to increase their efforts to give vigor to their children, when it was made clear as that twice two is four, that

without it a wretched life and an early death would be the consequence.

I may deceive myself upon this subject; — though I have not yet written you half I feel and think; — I may overvalue its advantages; but on my honor, I do now believe it would be both for science, pure science, for utility, and consequently for the only two highest ends of action to men in our profession, the noblest thing that could be done. Imagine, for a moment, that such a society should spread from its little centre at Boston; that after a few volumes from New-England, Philadelphia and New-York, then London and Edinburgh, &c., should raise their societies; — that the work should go on; — look forward only fifty years; — imagine a man like Andral to bring together and to extract the truth from the immense mass of materials collected; — would there not be truth and useful truth there? To set such a wheel in motion would it not be to have been useful? I long to talk with you upon this subject, my dear father. For two months past it has occupied many a musing hour in my mind. And yet I beg you'll say nothing of it. Don't think me crazy; I don't expect all that I write. I only hope that an idea has struck me which is practicable, and if practiced will lead to good.

Paris, December 1, 1832.

* * * * A woman, aged thirty-five, entered la Pitié day before yesterday, and died that night; — she was examined to-day. Her state was such that we could learn extremely little, except what we saw; — great prostration, weak, frequent pulse, enormously distended abdomen, which was ex-

tremely painful on pressure and meteorized; (very clearly a peritonitis). Further, there was some imperfect account of a uterine hæmorrhage, some one or two years since, and of other symptoms of uterine disease; — face a little yellow; — by auscultation crepitous râle behind, at left; (pneumony, the occult affection perhaps of fifteen days' duration.) More details unnecessary. M. Louis said, before opening the body, *that a fatal acute peritonitis, which was not secondary to some other disease*, was a thing he had not seen for five or six years, and perhaps never; — so that he thought it probable we should find evidence of some abdominal disease, anterior to the peritonitis. The woman was excessively fat; I do not remember to have ever seen so much fat about a subject. There was an hepatization of left lung, — and peritonitis; false membrane, and pus over lower two thirds of abdomen, having centre in pelvis over uterus. On first aspect I should have taken it for a pure, uncomplicated peritonitis; but on accurate examination we found the uterus greatly enlarged; its body occupied by a cancer; its lips both destroyed by ulceration; on the left superior corner of the organ was an abscess of the size of a walnut, filled with pus and of very thin parietes. Thus much for the case. Now for the reflections which flowed from it.

First. M. Louis again repeated what I have before said, that an *idiopathic* intense *fatal* peritonitis was a very rare disease.

Second. This led us farther, — and on thinking over and talking over the subject with Louis, I have got to realize more strongly than ever, this evening, what I have often written you in part before, viz.; how false are *our* ideas (I mean those of the medical public and medical authors in general) upon the danger of many diseases. 1. Pericarditis is called

a very fatal disease. 2. Peritonitis the same. 3. Pleuritis often the same. 4. Gastritis the same. 5. Erysipelas the same. And yet, in truth, M. Louis for eight or ten years passed entirely in hospitals, making daily autopsies, has never, or almost never seen, any one of them by itself fatal in a subject previously healthy. When I have heard him, from time to time, announce these *laws*, I have doubted; but on reference to my note-book, and my memory of individual cases, I have found that my experience coincides with his. I have but once in my life seen either of these cases alone, in a healthy subject, fatal; — a pleurisy in a child; — even here I am not *sure;* — and in the next place it was a child; — he pretends to have observed adults only.

PARIS, DECEMBER 26, 1832.

* * * * I have just seen an extremely interesting case at Hotel Dieu, under Chomel. A man about sixty years of age, chronic catarrh, pneumonia of five days on entrance; then evidence of hepatization of upper right lobe by bronchial respiration and bronchophony; no symptoms of disturbance in cerebrum, or digestive organs; bled; next day delirium added to other symptoms, which remain the same, except that expectoration is lessened; third day (eighth of the acute disease) delirium continues; cough, expectoration, dyspnœa and pulse much diminished in frequency and quantity, while the physical signs remain the same, and the countenance indicates more prostration; — death twelve hours after. No suspicion of arachnitis, for no disturbance from light or sound, no headache, no affection of eyes; delirium only, and that so common in pneumonia. But now that we have found a purulent effusion un-

der almost the whole arachnoid both of *brain* and *spinal marrow*, I cannot help remembering that diminution in the frequency of the pulse, that cessation of the pulmonic symptoms, while auscultation told still the same story; and also that the delirium was a little more *constant* than it ought to have been, *sympathetically*. Louis tells me he has seen one such case equally latent, complicated with pneumonia, and not *diagnosed* before death. It is certainly remarkable for its *latency*, and has greatly interested me. You shall see it more in detail at my return. And now, that I am upon the subject of pneumonia, I must tell you of two cases I have seen this morning, the first time that I have been able to see precisely the same thing.

1st. A man, aged fifty, cancer of cardiac orifice, no symptoms whatever except emaciation, difficulty of deglutition, and occasionally regurgitation of part of the food. The two last symptoms had almost ceased within a few days. To the above must be added gradual diminution of appetite, which had also risen since entrance; — emaciation advanced; — he was eating what we call the half, *i. e.* a pretty good allowance of bread, half a pound. In twelve hours from last visit, when he seemed as usual, he died, — having shown signs of increasing feebleness, &c., for about that length of time. We found a cancer at cardiac orifice and more than a hundred melanotic tumors in abdomen, with cancer of liver; but of all that at another time. Now for the lungs; the right lung, especially lower lobe, was externally darker, it contained less air, a more bloody fluid, its bronchia were redder than the left and its own upper. Was there here the first stage of pneumonia? Before I came to Europe, I presumed that these great pathologists could always distinguish inflammation from congestion; but it is not so easy a matter before

heptization; they do not love to be too positive about it. Such was the case with Chomel, — however, he thought it very probable; the more so, as at the moment we had two other men in the ward, who, while there with chronic disease, had both of them been seized with pneumonia characterized by sputa, crepitous râle, &c.; — and it was highly probable that a pneumonia of twelve hours had killed this man, already so prostrated. So much for the first case: observe, how chance favored my prosecution of that subject that morning: I had got an idea or two from Chomel, but I felt, as always, the doubt in these cases. To proceed, I went with B—, (who is now my constant companion and fellow-student, and whose mind, and talents, and eminent *virtue*, I mean honesty, love of truth for its own sake, with a due degree of vigor in pursuing it, I prize daily more and more) to la Pitié.

2d. There, a woman, dead, in stage of reaction from cholera; the night before death, (twelve hours before death,) I happened to be with B—, in ward, and ausculting found a crepitous râle in lower lobe, right lung. The evening before I had ausculted the whole chest with great care, — respiration perfect. Now there was a pneumonitis of the first degree. On dissection (I speak only of the lung)and a *very careful* examination of the right lower lobe with the upper, and with the two of the opposite side, I was able to establish the following distinctions. Had I not come glowing from Chomel, I could not have done so well. 1. Externally the right lower lobe was of a deeper violet color than the rest. 2. It was not by any means so much collapsed on raising the sternum. 3. On cutting it, it crepitated less. 4. The fluid which flowed from it on incision, was less frothy. 5. This fluid was also *most decidedly* more red. 6. From some of the bronchia of right lower lobe, was pressed out a little purulent fluid, which was seen

no where else. 7. The mucous membrane of the bronchia of this lobe was of a deeper red than any of the others. 8. This lobe *seemed* to me heavier than the others. From these eight characteristics, I think I may infer that there was inflammation, especially as I heard crepitous râle there twelve hours before death; although there were no granulations, no friability, no solidification, no hepatization. Having made this accurate analysis of the characters of this morbid part, and having arrived at this more *nette* idea, than I ever had before, of the true distinction of the first stage of inflammation from mere congestion, I was proud and delighted; showed it to my friends; repeated it half a dozen times, and do not abstain from writing you in full, for I was truly happy over it. I pray keep the letter. You may say I should have known it before, but if you look at my cases of cholera described by Louis and Andral, or at Laennec, or at Andral's clinique, you will see that no where is the thing drawn out so clearly as I have done it in the last page, by comparing together the two lungs.

Paris, January 16, 1833.

**** In very truth I look forward with fear and trembling to the day when I *must* employ my time to earn money, instead of to learn truth. I once laughed when I was told the student's is the happiest life. Persuaded as I am that there is very much in the exercise of our profession, that developes and satisfies the affections, — that delights the moral man, —yet I must acknowledge that, had circumstances favored it, I should have been pleased to pass at least eight, or ten years in the study of the sciences of pathology and therapeutics, in the hopes of establishing some important truths. I am afraid, my

dear father, that we are in the habit of regarding many things in both these sciences as axioms, which are very far from being proved. As an individual I can be satisfied of a therapeutic truth but in one of two modes. 1. I must see the treatment employed in a large number of cases, which are in no way selected; I must know and observe all the peculiarities of the disease, not only so as to know what it is; but what is the history and nature of the individual who has it, the history, or the general issue of the diseases of the season, &c., &c. These cases, being collected, are my raw material; I must study and class them. I must then count and see how often under such and such circumstances the treatment has been successful. This I have never done, with regard to any disease but cholera; but until it is done, my belief, as a scientific man, is, and must be insufficient to satisfy my mind. Such evidence is not necessary to prove that relief of symptoms follows treatment of various sorts; — of this no one can doubt; he sees it, who looks. But I speak of arresting, or materially shortening disease. On this point general impressions, such general impressions as my mind is capable of receiving, amount to *nothing;* for they are for a thousand reasons most deceptive; especially upon a subject like this, where we are previously inclined by our hopes, our interest, our humanity, coupled with those of the patient and his friends, always to look upon the bright side. Such then must be my mode of determining the truth with respect to any subject, that I investigate myself. Look to the history of cholera through the world; the successful remedies, almost as countless as its victims, that have been vaunted; the assured fronts and language of those who talk of their hundreds and thousands, and none lost; or yet worse, of the man who had one hundred patients, and saved one hundred and three; for

three women were safely accouched in the midst of the disease. We live indeed in darkness, and it costs more time to discover the falsity of pretended truth, than it would, perhaps, to reach something truly valuable. Am I wrong? is there any other way of establishing truth? 2d. Here, my dear father, is the only second mode, in which my mind (I do not say my will, — for it is not an affair of volition) will be persuaded; *i. e.* that if I do not see, he, who has seen, should write me such an account as to prove that he has investigated the subject in the same way.

This is to me a painful subject, for I would fain believe in all the therapeutics which you believe in; and yet the evidence that it is true must be derived from your and my general impressions. Now, when I have had such ample opportunity to see the futility of such evidence; when I hear men like Andral and Louis both declare, that they have been misled nine times out of ten, when they have trusted to such evidence; and that on a minute examination of the very facts, *upon which and from which* these general impressions have been founded and derived, they have discovered their error; when I come to examine English books, from which we receive the great mass of evidence with respect to therapeutical success, and see how they mingle, even the best of them, diseases vastly distinct in their natures; I ask myself, honestly, how far can I trust all this? Do I believe that bleeding *arrests* inflammation, as I believe that a certain combination of symptoms indicates such and such a lesion? Is not the last proved by numerous demonstrations? Have I ever seen *one* instance of what the books talk so easily of as to the first. I assure you, my dear father, in the present state of my knowledge, in my present view of the existing state of medicine, I believe that we admit many things in America as axioms, which are very

far from being proved. We have too long believed that, because demonstration, on many points, was impossible in medicine, it was not worth while to study it like an exact science. It is a very false position. Just reflect for a moment of what materials our therapeutic literature consists; almost without exception, chosen cases to prove the efficacy of such and such remedies. Is this the way to proceed. Suppose the chemist went to his laboratory *hoping* to find oxygen in *everything*, and made known to the public those cases only in which he found it; would his science advance? What a pity is it that ours is a mixture of science and trade; or what a a pity, *scientifically considered*, that we cannot be entirely indifferent as to results; then we might walk securely. But when we are hoping, and our patients are hoping, we are deceiving ourselves, and often the patients themselves, and us also. How difficult is it? shall we, dare we, can we trust to general impressions received from such sources, and in such a state of mind? If on any subject rigorous proof is absolutely necessary, it surely is to establish a fact in therapeutics. But enough; though when with you I wish to enlarge more upon this subject, and were it not for two reasons; 1, that I must earn my bread; 2, that I too dearly love that world of the affections to which our profession introduces us; I would devote my life to the accurate determination of some essential points of therapeutics. Remember, I do not deny the utility, in its fullest extent, of all the powerful agents which I have seen you employ; — on the contrary, I am inclined to believe in them to a certain extent; — but my mind (not my will) cannot receive the scanty evidence, which experience, lectures, and books have furnished as *proof* that all is true.

PARIS, JANUARY 25, 1833.

* * * * But we have had two instances of a more rare affection of the lungs this last week; gangrene. The first was in a young girl, with whom we first made acquaintance last year at la Pitié. She then entered Louis's ward, in March; cough excessive, oppression, respiration at last up to sixty-six in a minute, excessive sub-crepitous râle, the largest and most numerous I ever heard, over whole right lung behind: all this of recent origin. Louis doubted between bronchitis and acute phthisis; the actual symptoms could not be explained by either, but the excessive dyspnœa led him to hold the last in suspicion. This point could be decided only by the march of the affection, for we were then only five or six days from its debut. The cholera came; she was sent up into another ward; for a day or two I remember well going to auscult her; the same symptoms continued; but the progress of the epidemic demanding all my time, I lost sight of this as of many interesting cases. We heard no more of this young woman until the beginning of this month, when she entered again Louis's ward, with variola. Cough had continued during past year, but that and dyspnœa had decreased since we saw her; now not much emaciation; râle behind at right continued; nothing peculiar under clavicles; for several reasons you will see the idea of tubercles was given up. But what, during this time, had been the pulmonic disease, which thus produced cough and maintained a constant sub-crepitous râle over so great an extent? Only one single affection would explain it; dilatation of the bronchia. Such, then, was the diagnosis; but, one symptom of this affection was wanting, viz. the bronchophony. This it was impossible to have, from the aphony of the patient, caused by the variolous affection of the larynx. She died. Very beautiful dilatation of the bronchia, but also sev-

eral gangrenous spots in the lungs; some forming little cavities, filled with dark, gray, fetid, pultaceous matter; others yet consistent, but equally fetid; none opening into bronchia, which was the reason why this gangrene was not discovered. You know the characteristic sign is the odour of the sputa. This case is to me exceedingly interesting; I know not if I have given you an idea of it; but it is so associated with numerous pathological points of interest in my mind, that you will be sure to hear of it again at my return. You must know I have grown *garrulous, loquacious* since I came abroad, and shall need many a rebuke when we meet.

[The second case is omitted because given in detail, in a subsequent part of this volume, Case 23.]

* * * * I must not forget to mention that this is the third pulmonic gangrene we have seen in the dissecting room within ten days. Is it common just now? or is this accidental? You shall know if I see more. This disease, as it seems by the experience of Louis and Laennec, is by no means necessarily fatal. * * * *

* * * * How sad is this auscultation? these positive physical signs; which, though in themselves not enough, yet put the seal of certitude upon what before was doubtful; destroy the plausibility of many a willing interpretation of other symptoms; and leave us to fold our hands and await the event. But it must not be so. It is time that the pathological world should turn its attention to the causes; those things which precede and lead to the various organic diseases, and especially to this one which counts so many victims. It is time that we should begin to collect those new observations, which alone can furnish evidence upon this point; I mean the circumstances of the natural history of individuals. For shame upon us, that the antiquarian can spend years of toil and labor to decy-

pher an Egyptian hieroglyphic, the naturalist a life of hardships and privations to ascertain minute points of no practical interest, and that we should pass our lives *getting money*, when, by study and devotion to what is intrinsically of equal interest, simply as an exercise of the human mind, we could reach such results of essential importance to the happiness of millions. I suggested this thing to Andral at his house, a week since. We have learned to diagnose tubercles early, said I; we can tell a man that he has cancer of the stomach; but, that done, what must we add? — that a certain death awaits him, and that we can neither shorten, nor alleviate it. Is this the end of our studies? Arrived at this shore, shall we land and be idle; or, like honest and enthusiastic explorers, shall we advance into the country and look farther? I added, the only mode of advancing is to have the lives of a great number of individuals; see under what circumstances they have lived, and what has been their end; from these premises we may have, indeed, we must have important conclusions. He answered, "yes; but men will not do that." I know well that they will not; I know well that I have got to be exposed to a thousand temptations, and to nine hundred and ninety-nine, at least, I shall yield. But I pray God I may have strength to pursue this subject. There is none, which seems to me so important. La vérité est dans les faits. On this subject, as on every other, facts properly collected, must lead to good. My dear father, I am very serious on this point; I wish you would write whether you sympathize with me upon it. The question is not, is it easy? Nothing is easy to do well. The only question is, will it be useful? The only question is, is there any other mode of arriving at the truth?

Jan. 29. My dear father, I have just received yours of December 20th, and in it there is one sentiment, as to which I

most heartily agree with you. You say, "in spite of all they say of the wickedness of this world, you often reflect how many excellent men and women you have been acquainted with in this world."* I am rejoiced to read from my dear father an expression of my own experience; each day I see it verified; and my principle is, instead of always acting upon the defensive, to be willing to show my colors, and make friends with any worthy man. From this circumstance, my friends are numerous, and I have and do enjoy the acquaintance of many, who reward richly one's confidence and sympathy. * * * *

* * * * I have not heard from ——, since I last wrote you. His wife was then not very well, but I trust she is now better. I love to speak and write of them. Each day convinces me that the true happiness of man consists in a due and active development of his intellect and affections. Neither alone is sufficient; with a happy development of the two, how much happiness is there in this world.

PARIS, FEBRUARY 6, 1833.

* * * * Seriously, my dear father, I see that my life has got to be in future a little different from what my imagination loves to paint it. I must exercise a profession to get bread; whereas, willing to work, with a horror of an inactive life, I still would love to work solely to satisfy two passions, a love of

* I have printed the above for the sake of what follows, as that throws light on the character of the writer. In truth, the occasion of my remark, which he has quoted, was my felicitating him on having formed an acquaintance, and, in some cases, a friendship, with so many excellent people in Europe. I remarked to him, that it was an evidence that this world is not so bad, as it is often represented.

science and an exercise of the affections. And yet, I presume, the auri sacra fames will touch me; curse the day that it commences.

Paris, March 22, 1833.

* * * * As for medicine, since I have been in the habit of writing off cases at la Pitié, which takes up most of my time, I find I give you fewer details. In truth, my letters to you before, were a sort of note-book; now I have no use for it. But I must tell you of one or two cases of a few days past.

You remember the question, which often arises, on finding the gray, semi-transparent bodies in the lungs, which are very small; whether they are tubercles or not. I believe that they are. The proof is, 1st. That it is excessively rare to find them unless there be at the same time opaque, yellowish, decidedly tuberculous bodies likewise.

2d. In other organs, the same things are found in the early stages of tubercles. For example, to go no farther back than the experience of yesterday and to-day, — I have seen these same grayish white, semi-transparent bodies on the inner surface of an ulcer of the intestine, on the peritoneal coat of the intestine, on the substance of the spleen, on the surface of the liver and on the pleura.

3d. In the lungs we know that the tuberculous deposit commences superiorly and progresses downwards; well, at the summit we find opaque, yellow tubercles; a little lower exist tubercles, opaque at their centre and transparent, or semi-transparent at their edges; still lower, plain, simple, gray, semi-transparent bodies, without any opacity. These arguments are, I believe, unanswerable; we owe them to Louis.

We have had to-day a tuberculous peritoneum; and in the same subject there were just tubercles enough in the lungs to

save the law. But the interesting point to me was, that I had heard "my prolonged expiration" on the right side and not on the left. Now, although the lesion was excessively slight, yet it was decidedly more on right than left; in truth, in the apex of the left were four or five little disseminated tubercles; but in the right apex was one little conglomeration of them, as large as a small cherry, near the surface. Is it possible that this was recognized by physical signs; by auscultation? I know not why it should not be, and yet I dare not affirm it. I can only say, that in my notes it was written six or eight times, "a slight prolonged expiratory sound under right clavicle, which is not heard at left." Now this must have been owing to something; and, before the body was opened, I declared my belief that this right apex was the most affected. I dare scarcely believe that this sign is to prove of so much value. It is and ever will be rare to meet with an opportunity to test it in such a way, *i. e.* where it has occurred from so slight an alteration; because accident alone, or some secondary lesion, will cause death at so early a period. It gives me great hopes, however, that I have really discovered a very important early sign of tubercle, perhaps the earliest that is appreciable. I have now many proofs of its value, though not enough to show its *relative* value to other early signs.

PARIS, APRIL 5, 1833.

* * * * Up to the time of Louis the same distinction had not been made, as now, between an acute disease, in a *previously healthy* subject, and in one who was already diseased. The pathological laws, which reign over the acute disease in these two instances, are very different however. Again, I

mean previous to the light which Louis has thrown upon our science, the force and beauty of which I feel daily more and more; attention was not paid to *all the functions* during life and all *the organs* after death; at least by the French and English authors who have written; for it is with pride and delight that I each day repeat to myself, "Yes, my father examined in every disease, all the functions;" he felt the importance of knowing the state of all, in each disease; of each of them. But did he examine *all the organs* after death? No; this is peculiar to Louis. He can tell you in each disease not only the lesions of the organ originally affected; but also the proportion of the secondary lesions, which follow each disease. This is perhaps one of the greatest services, which my French master has rendered to science; and as I begun, so I finish, from an inattention to it, as well as to some other essential points, many of the observations of the best authors lose one half their value. May I give you a single example of the beautiful results, to which Louis has arrived by this scrupulous examination of all the organs in every disease. Variola,—which, thank God, I shall not see at home as I have here,—what is the usual cause of death in this disease when it proves fatal? Authors talk of the exhausted system, inflammation of alimentary canal, inflammation of the brain, &c.—all this is nonsense; for it cannot be *proved*. But what has Louis found to be the cause of death? While at la Charité (six years since) of twenty cases, sixteen died of laryngitis; false membrane lining the larynx; swelling, &c. of mucous membrane; great diminution of calibre of glottis. This he has seen confirmed at least as many times more; as I have also six or eight times at la Pitié. Well, why was not this essential and all-important lesion known before? simply because pathologists did *not open the larynx* of variolous subjects.

They were, in respect to this point, in the same condition as the ancients with respect to morbid anatomy in general.

I choose this example because it is striking; but both of my beloved master's works* are full of similar ones.

Paris, June 6, 1833.

* * * * I must not forget to tell you that I have this moment seen a new case of Bright's kidney, the second which Andral has found since I showed him mine. But what especially fills my mind at this moment is the most superb case of pneumonia I ever saw, now in our ward. Superb! why? from its therapeutic interest. How delicious is it, among the mass of dying and dead, when the only occupation is to describe the phenomena during and after life, and now and then to palliate; how delicious it is, I say, to see here and there a severe case of acute disease, dangerous from its nature, arrested; its duration reduced from twenty to four, or five days. Listen. A man æt. 36, on the night of the 3d of this month, at eleven P. M. was roused suddenly from his sleep by severe pain in left side; to which were added oppression, cough, and preumonitic expectoration. He was perfectly well when he went to bed, worked, &c. as usual during the day. No more sleep that night;—increase of symptoms with heat, anorexy, thirst, &c. Entered hospital in state of extreme dyspnœa, &c. at nine, A. M. next morning: then bronchial respiration over the middle third of left chest behind, with a little crepitous râle and bronchophony. (Hepatization of large portion of left lung already at tenth hour of the disease). Bled to twenty ounces, when he fainted. I saw him again at two, P. M. The crepitous râle had

* The reference here is to Louis on phthisis, and on typhus.

disappeared, — nothing but bronchial respiration. Respiration, thirty-six a minute; (I forgot to mention flatness on percussion over same space;) still much fever, anxiety, pain, dyspnœa, although great relief since morning. Next morning the 5th, same condition except that the general symptoms, as also the rational symptoms, had decreased in intensity, whereas the bronchial respiration was still more distinct; as yet no return of crepitous râle. Venesection to fifteen ounces. In evening at six, P. M. great relief expressed by patient as to all symptoms. Respiration twenty-two instead of thirty-six, as last evening; — bronchial respiration almost disappeared, and its place supplied by the returning crepitous râle, with some vesicular expansion, although still a little of the bronchial character; — flatness less. This morning, 6th, man expresses a state of "perfectly well;" says he can turn in every direction: in spite of thirty-five ounces of blood lost, is infinitely stronger than at entrance; — pulse seventy-six, instead of one hundred: respiration twenty-two, instead of thirty-six; no pain, nor other symptoms; asks for food; vesicular expansion abundant at the left, behind, with crepitous râle and scarcely any bronchial respiration. The man is nearly convalescent, and here we are at the fifty-fifth hour of a grave pneumonia, which occupied the two inferior thirds of the left lung behind, which began severely, which had already reached hepatization at its tenth hour, which was attended with such severe symptoms as to make patient enter at that early hour. My dear father, I rub my hands with joy. I *hope* for treatment during the first hours. I say *hope;* for *although* I may safely say I have passed one quarter of the hours of day-light, indeed half, in the wards of la Pitié for six months, and although this is No. 21, of my cases of pure pneumonia, which I have collected in the greatest detail there, still it is also the first that I have seen

apparently controlled by venesection; — the first bled under less than twenty-four hours. I have no time to write another sheet, and ought almost beg pardon for filling this with so rapid and abridged a history to an American physician, to whom such cases are not rare.

PARIS, JUNE 27, 1833.

* * * * I received your letters of the 13th and 21st ult., three nights since, together. They cost me thirty drops of laudanum, for my heart beat so hard and my head worked so fast, in consequence of the thoughts, speculations, castle-building, &c. to which they gave rise, that I could not sleep, and knowing I must be up at six, A. M. I could not afford to play the dreamer with my eyes open, all night. So you consent to my observing a certain number of years, if I see fit, after a DUE consideration of the matter, and you advise me not to decide until upon the scene of my future life I may better know, weigh and appreciate the circumstances which should govern me. My dear father, I thank you equally for the permission and the advice, and promise as implicitly to follow the one as I gratefully accept the other. I know well, there are a thousand circumstances to consider relative to this subject, perhaps some occur to me which strike you with less force: perhaps my life here and my experience of the men in the first places may have given me certain hopes, and at the same time certain horrors, which you do not realize so strongly as I do. I say perhaps, and perhaps only; — for you are so apt to look at every side of a question, that I dare hardly presume. Certainly on the other hand, *certainly* you will present to my mind views of the subject, which I neither see nor feel;

and it would be only to continue in the sad way I have always followed, to listen too little to the wisdom and kindness of the best of fathers, did I allow myself to decide on any important point of life without his aid and instruction. Be assured then, my dear father, that my mind shall be kept open to conviction. I ask only that, once there, you shall endeavor to keep my mind in a right state, and not let the judgment be biassed by desires and temptations, laudable in themselves, but baneful to him who would for a while make science his sole mistress. The more I advance in life the more I see and feel convinced that its great and chief happiness is self-education; self-development, intellectual and moral. God knows I have enough of both to do. May I only be industrious at the work! I tremble when I reflect upon the number of subjects as yet unknown, but which must be known to me.

The two letters, which follow, were addressed to a medical friend, who kindly sent them to me. The playful style of controversy will be readily understood from the extracts here printed; though it would be more so, if the letters were given entire. I have, however, erased all personal allusions. I trust that the letters will not be thought devoid of interest. J. J.

PARIS, DECEMBER 9, 1832.

MY DEAR DOCTOR, —

If you will deign to receive a word from a poor youth, who strives to estimate morbid anatomy at its true value, placing it neither above nor below its proper rank, he will be happy to say a word in self-defence. But, first, let me thank you for your kindness in writing me such a good long letter, full of pleasant words and kind rebukes and wholesome counsel.

I am glad that you are not displeased with my little memoir upon cholera. I grieve that you misunderstand me upon some points, and that we cannot agree upon a few others.

1st. You misunderstand extremely my estimation of morbid anatomy. I see I must make a rapid confession of faith in order to let you see in what light I consider this science. 1. I conceive it to be *one* of the modes by which we are to obtain a knowledge of the phenomena of disease, — *but by no means the only one.* 2. I conceive and know that in some cases it affords very important *positive* knowledge as to the nature of disease. 3. I am equally aware that in many cases it affords *negative* information only. But this *negative* information is as important, perhaps, as the positive. It is as useful to know that a thing *is not* as that *it is:* each is a *truth* in nature: each enters equally, as an element, into science: to omit either, is to be guilty of an equal omission. 4. Besides those cases, in which morbid anatomy teaches us nothing positive, are yet many others, in which, although from it we may gain positive knowledge, we are still sure that something more has existed, and has influenced the organs and the economy during life. 5. Indeed, in all cases of disease, there is ever an unknown something which morbid anatomy can *never teach us:* viz.; that state, or condition of the parts, which precedes, and is the immediate cause of, the morbid process; and which we know must exist, though we can neither see nor feel it. *En resumé*, then, I esteem morbid anatomy as always affording evidence, either *positive, or negative,* which must be taken into the account by every rational pathologist; but, on the other hand, there lives not the man, who is more firmly persuaded than myself of its insufficiency to afford us an answer to all that we must look for in this dark science of pathology. It is but last week that I wrote my father very much in these

words: "If my life in Paris has enabled me to appreciate, much more fully than before, the advantages of morbid anatomy, my mind has not been the less struck with this all-important truth, that morbid anatomy is very far from sufficient to satisfy all the desiderata of the pathologist." I take the trouble to go a little into detail here, because I regard the man, who esteems this science as the "fons et origo," and the only true one, of important and well-established truth in pathology, I regard such a man, I say, as taking a very limited view of this science, and as being very deficient in his mode of pursuing it. I am unwilling that you should regard me as such.

But though you will be pleased with this avowal, you will ask me, what other evidence I am willing to admit in order to decide the *nature of disease*. I am ready to answer, two other modes of evidence are admissible; but both are to be used with extreme caution, most especially the last. 1. The symptoms; — these, it is evident, will be variously esteemed according to the varying *physiological views* of the observer. The ground, then, is dangerous; for there are theories upon the animal economy, so mechanical, so chemical, so wanting in beauty, leading so little to the delightful views of God and his power, which certain others do inspire us with, that, I thank God, my mind is made to admit the last rather than the first. It must be allowed that the evidence afforded of the nature of a disease, by the symptoms of that disease, is to be adopted with great circumspection. I could cite examples of an abuse of this species of evidence; but to you is useless. 2. Analogy; how much may we trust to analogy? I doubt not it is useful. Each day I employ it; indeed, without it I could scarcely live. But I fear it greatly; I know how liable it is to abuse.

And, now, my dear doctor, that I have spent half a sheet upon this subject, I will begin another to answer your second complaint against your humble servant; — a few words will suffice.

2d. You abuse me because I will not *generalize:* in other words, because I will not adopt, as my sworn creed, those opinions which originated with your ever to-be-respected friend and master, and which have been confirmed and strengthened by your own laborious observation and research. In the first place, I know that you would despise me more than any other could, did I pretend, through a desire in every respect to coincide with a man to whom both my reason and my affections have so much attached me, to adopt all his opinions, when I was not satisfied that they were true. I do not yet know the facts. I am by no means in a condition to decide the question, whether fever be only a local or a general disease; and, if either, whether it has always one seat, or always consists in the same phenomena. Instead of not generalizing enough, I have done so too much; many questions are now doubtful in my mind, to which I was inclined to give a very positive answer before I came to Europe. And why have they become doubtful? Simply because I have learned facts which I did not, then, know; and I think it wise to wait till I have become yet better acquainted with them, and to search for others, before I form any general opinions upon some most important subjects. Instead of being in a hurry, I sincerely hope that I shall yet wait ten years or more: and above all, I trust I shall always be of my present mind upon one point, viz.: to prefer to acknowledge myself in doubt, where the nature of the subject necessarily renders it doubtful, than to attach myself to any opinion, the truth of which I know to be very far from demonstrable. My mind is so constituted that I *enjoy* more to say,

"well, this point is unsettled; there are such arguments or such facts for one view, and again such others for the other; we cannot yet decide;" than to cry with the ardent and restless theorist, "I know that there *is a certain degree of doubt*, but I *will* believe, for on the *whole* it seems to me true." It may be politic, or even useful at times to suppress the little doubts, which arise against what we regard as important truth, which is to affect the public; — as we may say nothing about our fears of the possible ill-effects of a bold course of medical treatment, which we think on the whole useful; and yet, as *scientific men*, in both cases, it would be the height of folly for us not to distinguish between *probable* and *certain*, *demonstrated* truth. I apply this to myself, the student, who am not yet sufficiently advanced in my knowledge of facts to form an opinion upon certain subjects. There are several in which my father *has* and I had implicit belief, but which now I doubt; he *knows* them to be true; I do not. It is the same with you; you have studied your subject, long, fully, in all its details; you have arrived at an opinion; but that does not necessarily make me a subscriber to it; because you are learned, it does not make me the less a mere learner; because you have run the course and attained your end, and examined closely your object, and thus fixed firmly your opinion, it does not prove that I am not simply on the road, as yet unacquainted with much that you are familiar with. In other words, because you, from your abundance of knowledge, have a right to generalize, I, in the depth of my ignorance, have no such right. I might possibly have taken the liberty of trying to prove to you that you generalize *too soon*, as you have accused me of the contrary extreme; but I fear your *heavy cannon*, and I will, therefore, be silent, preferring to answer by the defensive, instead of answering your question with another, as the robber

says to Alexander, or Alexander to the robber in one of my school-days' dialogues, for I forget which.

PARIS, JUNE 18, 1833.

MY DEAR DOCTOR, —

We had yesterday the pleasure of seeing your friend A.; and, although our interest with the *Northern Courts* is not so immense as your words would seem to imply, we shall endeavor to render what little services are in our power to Mr. A., whom I see to be a good fellow, because he seems duly to appreciate your character. * * * *

Do you mean to overwhelm me with ridicule? When I have chosen my science, and you yours, do you think it just to take it for granted that, because the one is eminently calculated to develope the mind's best powers and the soul's best affections, the other cannot and is not equally so? As a scientific man, you must surely forget yourself, when you attempt to prove that botany, or geology, or any other of the sciences, *as a science*, is better calculated to improve the intellect, or to afford pleasure to the student, than is medicine; or, rather, the accessory sciences which compose it. What is the pleasure, what the occupation of a truly scientific man? Surely, from an exact and detailed observation of what his senses can demonstrate to him, upon a given subject, to trace the great general laws of nature upon that subject. This I maintain to be the fundamental attraction of every science, to one who will view the subject as a man of science should. This being taken for granted, and I think you will hardly deny it me, I would beg you to point out the real distinction, *scientifically speaking*, between tracing the pollen-tubes to the ovula of an asclepias, with the eye, and following with the ear the various modifica-

tions of sound produced in the chest by a pneumonia. Why, with my stethescope, may I not as much enjoy a crepitous râle, (of the first order,) or a bronchial respiration of the purest tone, as Brown, with his microscope, a little channel leading from one part to another of his flower. In both cases what do we do? Appreciate, by the nice use of our senses, the phenomena appreciable by them, and then from those phenomena, connected with our previous knowledge, arrive at some law of the existence of these two *beings;* an asclepias on the one hand, a pneumonia upon the other. Perhaps I deceive myself; but I think not; if any distinction exists between these two things, point it out, I pray of you. The reason that medicine, (or, to use a better term, the reason that pathology and therapeutics, or the natural history of disease before and after death, and the influence of external agents upon the march of disease,) is so despised as a science, is, that it has never yet been studied as a *science.* But the time has come; it actually now takes rank with the other sciences; only it is the least advanced of them. We have learned that *positive* knowledge may be gained, where we formerly admitted the most loose assertions of each popular author, as he came along. Studied as a *science,* I maintain that it has as strong a claim as any other, upon the best heads; and upon any one, whose object is to develope to the utmost his intellectual powers. Why, then, abuse me for studying it? Should I make duty my guide? My duty is to prepare myself, as well as lies in my power, upon this obscure and difficult subject, which is to be the practical subject of my life. Is it enough for me to know what the books can teach me? They contain more falsehood than truth; and I cannot distinguish between them without studying nature. My duty, then, reduces me to the necessity of observing nature in her diseased operations in the human economy. But how much

time shall I give to it? As much as possible, is the only answer; because even that will not suffice. Again, shall we leave duty to those who follow its dictates more than myself; shall I ask of taste, shall I take pleasure for my guide? Same answer; my education and habits of life have so constituted me, that it is my greatest pleasure to pursue disease in its myriad wanderings. *It is:* I do not say *it will be.* Since, then, duty and pleasure lead me to one object, why should I turn my back upon it? But, again, frankly I will acknowledge one thing, viz. that in my castle-building for future life, I sometimes tremble; and your sentence, of "pity poor Jackson's wife," has made me tremble anew. To effect what I propose to myself, and what I truly think will be the best possible use of my means and time, will occupy me most intensely for years. I do not mean that I shall not have minutes at my disposal and hours too; but that, in all the best and brightest of those minutes, when my mind is truly awake, it will inevitably recur to the subjects of my study. All this need not be; I can put bounds to what I propose. I can, from the moment I reach home, devote but a given time to the objects of science. But, my dear ——, as a kind friend, you should look, with a little of your heart's as well as your mind's eye, upon my situation. You should reflect upon my father, what he is, and where he is, and what will be his disappointment if I fall short in the race. It must, then, be my object so to follow my studies, as best to *secure* what he desires and depends upon. Upon this point, I believe, honestly, that I am better able to judge, than either yourself, or he. I believe so, because, pursuing the science later than either of you, I know and feel more deeply what is to be its march for the next half century. I know how it will be followed by those, who are to rank as mas-

ters. But, again, if pleasure, happiness, be the only end of life, I do not agree with you as to the means of gaining it. I do not here refer to any difference as to the estimation of domestic enjoyments; I always appreciated them most highly. I refer to science as a source of happiness. In what way should a man cultivate it, so as to obtain the greatest possible individual pleasure from it? Should he be superficially acquainted with several branches of science, reading what *others* have observed, or, perhaps, observing in general what *others* have pointed out in detail; or should he be one of those, who himself observes and describes for *others*? In other words, is the happiness, which may be derived from the contemplation of the *laws discovered* by others, to be compared with that, experienced by him who discovers them? Is a knowledge of *generals*, which, after all, a man, who knows not the details intimately, must receive partly on *trust*, — is that knowledge, I ask, productive of the same pleasurable emotions, as a *knowledge* of details; of those details upon which the *generals* are founded? We all admire the beautiful laws of gravity, of electricity, of chemistry. But have we ever experienced a millionth part of the elevation ("exaltation") of Newton, or Franklin, or Davy? Surely not. The same is true upon a smaller scale. I am much happier in pursuing my science in a strictly scientific manner, *i. e.* by an actual observation of all diseased phenomena by my own senses, than if I read for years the results of the labors of Cuvier and Brown, and Decandolle, &c. &c. Really, to study any science, with the hopes of at all advancing it, requires all one's time, and all his mind; but, if he loves that science, he will be repaid by what he discovers.

MEDICAL CASES

COLLECTED BY

JAMES JACKSON, JR., M. D.

MEDICAL CASES.

Of the following cases, the first ten are copied from my son's common-place book, in which they were recorded before his visit to Europe; and the first of them, as will be seen, in less than eighteen months after he began his medical studies. As cases, they are professedly imperfect; he had scarcely seen the subjects of them during life, and the notes were made by him as contributions to morbid anatomy. Yet I have selected these from among many, because each one contains something sufficiently definite and sufficiently interesting for the pathologist. Of the remaining twenty nearly all were collected in Paris. The notes of these are very full, but they are very briefly expressed. It was impossible to print them as they were; they have been written out in terms as full as is requisite and usual in medical cases. As far as possible the words of the original are preserved, especially the most important words and expressions. In doing this I have been assisted by Henry I. Bowditch, M. D. All the cases of pneumonitis and two of those of typhus were drawn up by him. He was peculiarly qualified for this task, as he was in Paris with my son in the winter and spring of 1832—3, and with him in all his labors in the hospital, where these cases were collected. Inspired

by the same desire for knowledge and love of truth, these young men derived the greatest enjoyment from laboring together as brothers. They sought only to aid each other, and promised themselves the highest gratification in working side by side again, after their return to their own city. He, who remains, will, I am sure, continue his labors as a worthy member of "the Society of Medical Observation," with a generous regard to the "sacred office" with which he has been invested.

In these cases the remedies employed and the manner of using them are not always stated very fully. I have, however, taken care that the prescription shall be inserted in all instances, where the remedy was possessed of much medicinal power.

The autopsies might have been arranged in a more uniform method, and at one time I designed to do this. That is, in the description the external appearances might have been noticed first, then those of the head, chest and abdomen in regular order. I did not do this, but followed the order of the original notes in each instance from these considerations. I presumed that the different parts were there described in each case in the order, in which they were actually examined; and it is right that they should be described in that order. The reason for this will appear, if we remember that, when the heart and its vessels are opened and emptied before the head is examined, the appearances in this will sometimes be varied from what they would have been, if the brain had been examined first. And even, when this last is done first, and the blood flows very abundantly, as it sometimes does, from its vessels, there may be some difference produced as to the fulness of the superior vana cava at least, and possibly something more.

In regard to the selection which I have made from the cases left by my son, I wish to add some remarks to those made in the memoir. I have omitted cases, which did not terminate

fatally, not because they had not any value, but because they were much less valuable than those, to which autopsies were attached. If we have an autopsy, we have some test, by which to decide on the accuracy of the case; and we always may derive some certain advantage, if the whole case be stated accurately, as regards the phenomena before and after death. But when we have a case, which has not terminated fatally, we must rely much on the reporter. If the reporter be a young man, as yet little experienced, some distrust will be attached to his statements in the minds of many. Such cases therefore will not be universally received as affording grounds for important inferences.

I have not selected any cases of emphysema of the lungs, except where this affection happened to be combined with tubercles. Yet there are not perhaps any cases left by my son so valuable, as those on emphysema. I omitted these cases, because I knew that M. Louis had prepared a paper on this disease, and that this paper was in the press; that for this paper he employed the cases collected by my son in addition to his own, and that he would publish such of these as he thought would be useful. I therefore was not willing to take the chance of publishing the same cases, and have thought it best to refer my readers to the forthcoming paper by M. Louis, in which I well know he will do ample justice to the labors of his pupil, and will bring forward, at the same time, the results of his own researches in this common and very interesting disease.

N. B. After seeing the cases in print I shall very probably find some explanations necessary. If so, these will be given in a note at the end. I shall certainly subjoin there the formulæ for some of the articles, which are mentioned by their titles in the prescriptions. The reader will therefore look there when reading the cases.

CASE I.

ORGANIC DISEASE OF THE STOMACH.

Dec. 30, 1829. — Examination of J. R. J. R. was a man of an uncommonly strong and muscular frame. He lived to the age of 72 in the enjoyment, until very recently, of the most uninterrupted good health. He drank cold water and in general was a man of very temperate habits in all points; but his friends thought that, of plain food and drink he took a very good share, and he might perhaps be called a large eater. He was accustomed to take much and regular exercise, and thus had preserved an excellent habit of body.

During the last summer, having had occasion to take a long journey, he suffered great exposure and fatigue, and there was induced a very troublesome and serious costiveness, which was overcome with some difficulty. Shortly afterward, in October, he experienced a difficulty in swallowing, which was soon followed by a vomiting of his food. For these symptoms he was treated with emetics, &c., in hopes of throwing off the disease; but in vain.

The costiveness and difficulty of swallowing, without nausea, or loss of appetite, continued. He had pain, though not extreme, about the epigastrium, a little to the right of the ensiform cartilage. The difficulty of swallowing was somewhat diminished, when he laid upon the left side. For the last fortnight he had continually vomited a bloody fluid, of a coffee-ground aspect. These brief notices of his case I gathered from his physician, who was kind enough to invite me to attend the post-mortem examination.

Autopsy.

External Appearances. — Body by no means extremely emaciated, but had lost some flesh. Tumor in left axilla, which was examined; it was nearly as large as a common

kidney, was mostly composed of fat, with some glandular matter, indurated, and of a reddish-gray color.

Thorax. — The organs in this cavity were in a remarkably healthy state.

Abdomen. — On opening into this cavity, there was first perceived a tumor, of more than an inch in diameter, between the *omentum minus* and the stomach. This, upon being opened, was found to be partly fatty, partly an indurated schirrous mass. Opening the stomach, there were observed many dark spots, of an eighth of an inch, or more, in diameter, scattered about its mucous membrane. These were probably owing, or perhaps we may say certainly owing, to the coagulation of the blood effused from the mouths of the vessels in this membrane. Passing the finger from the cardiac orifice, for about four inches up the œsophagus, there was felt, first, a considerable stricture, and, secondly, a thickening and induration of the part. On a more close inspection of the parts, as they laid, there was found a very perceptible tumor upon the right and outer part of the œsophagus, but it was not connected with the tumor of which I have before spoken.

Here, then was the main seat of the disease; and on cutting into the œsophagus, that we might view the internal coat, we found one very considerable patch of this completely ulcerated; and on rubbing the organ with the sponge, without violence, the mucous membrane was seen with a ragged edge, and became immediately detached, so as to be raised for the space of three quarters of an inch, towards the upper part, with perfect ease. The pyloric orifice was somewhat diseased, being a little thickened and indurated; but very evidently the most essential part of the disease, as well as that which was most clearly indicated by the symptoms, was at and about the cardiac orifice.

The left lobe of the liver was uncommonly small; its extremity not reaching to the left side of the spine. Indeed the whole organ was of a very small size, but was very healthy in its aspect. The gall-bladder was very much distended with black bile.

The small intestines were of an unusually small calibre; not sufficiently large, for the most part, to admit the entrance of the middle finger, as I should judge; for I did not make the experiment. The accumulation of fat about the parts in the internal cavities was very observable, as it generally is in old subjects.

Remarks.—1st. It has occurred to me whether the absence of nausea and of anorexy was not in part owing to the seat of the disease; or, in other words, had there been disease of a similar character and equal in amount within the very cavity of the stomach, would not these affections have been more likely to ensue?

2d. The fact of his being better able to swallow when inclining to the left side, is explained by the seat of the tumor in the œsophagus, which was mostly upon the right.

3d. In what way shall we reconcile the sudden occurrence of symptoms, which began to appear in the autumn, (the patient having previously enjoyed good health,) with such a mass of disease, which must have been a long time forming? My father thinks that the fatigue and exposure during the journey, and the costiveness induced thereby, acted as exciting causes to an aggravation of the local disease. Thus ulceration and the consequent symptoms and sufferings ensued. We may learn from this the importance of avoiding all such exciting causes, as much as possible, during any serious chronic local disease; as by the practice of this preventive method we may retard the issue of the same, although its termination may be sooner or later necessarily fatal.

CASE II.

ORGANIC DISEASE OF STOMACH.

Jan. 26, 1830. — Emmanuel Joseph, a Portuguese, æt. 44, entered the Massachusetts General Hospital on the 18th. He had formerly been a sailor, but for the last few years had worked on one of the wharves in the city, and was apparently a man of good habits. He had been well, according to his own account and that of his fellow-boarders, till within about three weeks; at that time, being troubled at his stomach, he took an antimonial emetic, which operated very severely; this he followed in a day or two with a cathartic of senna and salts. When he entered the hospital, he had a constant vomiting, with constipation, and some colic pains, not very severe. At the first visit, from his description of his sufferings, the physician suspected the existence of an organic disease of the stomach. He was treated with cathartics, which he did not for a time retain upon his stomach; however, these with enemata were persevered in, and about the fifth day he was reported to have had copious discharges of an unequivocally fecal character. This had before been doubtful. Extreme thirst, (he once drank his own urine,) vomiting, distressing feeling about the epigastrium, and great coldness in these parts for the last few days at least, were the most prominent symptoms. The abdomen, instead of being distended, was much sunken and flat, and its parietes very rigid. Generally, there was great prostration of strength, great emaciation, very marked lividity of the skin, and a low feeble pulse, somewhat varying in frequency. Attempts were made to support and revive him from this state, with stimulants, — brandy, etc., but in vain. These seemed to alleviate his sufferings, by allaying somewhat his extreme thirst, and, in a degree, overcoming his acute sen-

sations of internal coldness; but his disease was such as not to be *lived through*, and stimulants were of no avail.

Autopsy.

The abdomen only was opened. The mucous coat of the stomach was extremely corrugated, presenting a very peculiar aspect. The pyloric orifice was almost entirely obliterated; there being a schirrous tumor, or schirrous deposit, very hard and firm, between the mucous and peritoneal coats of this organ. The disease extended just to the commencement of the duodenum. Two spots within the mucous membrane were much reddened, very evidently in a state of inflammation; there was a small quantity of thick mucus, and a little purulent matter, upon the internal mucous surface of this tumor. In many parts of the small intestines, in the cæcum, and, perhaps six inches up the colon, the mucous membrane was in a state of high inflammation, but in no part had it advanced to ulceration. This surface presented a very beautiful crimson color, such as I have never before seen; but this examination being made before the body was cold, much sooner after death than I had ever before witnessed, I cannot say how much is to be attributed to that circumstance. The spleen was very small, not a third part its usual size.

Remark. — The circumstance of the long existence of this disease, which must have taken a long time for its formation, without any disturbance to the patient, is quite worthy of observation, although by no means new.

By the Editor. — These two cases, Nos. I and II, are incomplete in their details; yet the facts are sufficiently valuable to be recorded. The writer learnt afterwards that instances of organic disease of the stomach, without grave symptoms until a late stage, are not so rare as has been com-

monly supposed. These two cases are among the first recorded by him, and both of them occurred within eighteen months after he commenced the study of medicine.

CASE III.

PHTHISIS. METALLIC TINKLING.

Dec. 28, 1829. — I was invited this morning by Dr. Fisher, physician of the House of Industry, (South Boston,) to attend with him the examination of a woman, who died the night before. I had seen the patient about a month ago, and was made acquainted, at that time, with a few particulars of the case. She had been for some time, as I was informed, and as her appearance fully indicated, on her bed, with unequivocal marks of phthisis. The circumstance most observable at that time, and for which I was invited to see her, was, that the metallic tinkling had been heard in her chest, through the medium of the stethescope. This was observed upon the left side of the thorax, in a somewhat confined spot. It was just below and partly upon the scapula, and also, if I did not mistake, over the space between the scapula and spine. On applying the instrument, I heard it very distinctly several times. It was audible immediately upon the termination of inspiration, as expiration commenced, and this with great regularity. Dr. Fisher likened it to the sound produced by the blowing of air into a wet bladder. Another gentleman thought it most like a drop of water falling into a glass bottle, half filled with fluid. For myself, I should say it was something between the ticking of a watch, and the sound produced by striking a small bar of steel upon any resounding body. Whatever this sound may have resembled, however, it was most unequivocally metallic

in its nature. This patient had diarrhœa for some days previous to death.

Autopsy.

Before using the scalpel, we tried the succussion, according to the mode advised by Laennec. While one of us held his ear near the part, another tapped the shoulder of the subject, being in an erect posture, with force sufficient to shake the upper part of the body, and we thus successively heard, very distinctly, a metallic sound; not, indeed, so decidedly metallic as we had before heard through the stethescope; but, still, somewhat partaking of a metallic nature.

External Appearances. — Nothing externally was worthy of notice, except the red color of the most dependent parts, as contrasted with the paleness of the anterior parts of the body.

Thorax. — Upon opening into this cavity, there were apparent, at first sight, marks of great disease upon both sides. There was a little serous fluid in the pleural cavity, perhaps six or eight ounces. The sternum and cartilages of the ribs being removed in the usual manner, the organs *in situ* presented the following appearances; adhesive bands between the two folds of the pleura, upon the right side, prevented any observation before detachment of the same, of that lung, so unbroken was their extent from the top to the bottom of the thorax. The right edge of the pericardium extended somewhat beyond that of the sternum, and this whole membrane was of a larger size than common. Upon the left side the adhesions between the two pleuras appeared to be equally as extensive and strong as upon the right; the lower lobe also of this lung being in part adherent to the pericardium. The upper lobe presented at once the appearance of a large cyst, and upon handling and tapping this with the finger we felt assured that

it was a large cavity filled with air and fluid, and we again heard a faint metallic sound.

Putting a ligature upon the trachea and blood-vessels, the whole of the lungs, together with the heart and pericardium were taken out, the adhesions natural and morbid being removed.

The lungs were adherent, not in every point, but very generally to the parietes of the chest. In the *right lung*, about opposite the fourth and fifth ribs, was a large abscess not very deep, ragged, having the pleura for its external wall. A great portion of this lung was healthy, but in many parts tubercles were perceptible, and there were one or two small abscesses similar to the one above described. Of the *left lung*, one half of the lower lobe was healthy, of a natural color and crepitated on pressure. Of the upper lobe a very small portion only, and that the most dependent part, had preserved its organization. The morbid half of the lower lobe was studded with tubercles of various sizes, both within and upon the surface. The remainder of the upper lobe was, as I have said before, one great cyst, evidently containing air and fluid. It was thought best to puncture this under water, so that we might receive the gaseous portion in a glass. Our object was so far accomplished as to prove incontestibly the existence of air in the cavity; but we could not form any precise estimate of the quantity, as a part of it escaped our glass. Upon opening into the cavity we found nearly a pint of purulent fluid, of a cream-like consistence. The walls of the cyst were one third of an inch in thickness. Externally was a dense, hard, reddish coat, viz.; a false membrane, which before removal was strongly adherent to the costal pleura. Immediately next to this was a somewhat thicker coat, white, rather tough, resembling in appearance the cartilaginous texture.

Within was a suppurating surface for the most part very red and uneven. Upon the left side of this there were three or four elevations, about a quarter of an inch in height and thickness and two or three in length. These were of a red color, and such was their aspect, that we supposed them at first to be blood vessels, whose cavities had been obliterated. They were for the most part adherent to the internal surface, but in one place, of less than an inch in length, a little elevated, so that the finger could be passed underneath, as under an arch.

We now cut down from the trachea, that we might follow the bronchia and ascertain if there was any communication between this cavity and the outward air. Three or four several openings were discovered, two of them of considerable size, admitting easily the introduction of a common-sized director. We found also that we were wrong in our previous supposition with regard to the long red elevations, above mentioned; for by following along the bronchia with the probe we felt here, as at many other points, an obstruction to its farther progress precisely in the direction of these obliterated canals. It was very evident then that these were not blood, but air-vessels, and that our first conjecture was a false one.

Heart. This organ was of a full size, I should say rather large. Dr. F. thought not. It was pale and flabby. There was a small quantity of water in the pericardium; — certainly not more than usual. Over the right ventricle was a small spot of a light florid color, as if fully injected with arterial blood, quite peculiar in its appearance; not circular, but of an irregular circumference. This color subsided after immersion in water, so that two days after removal, no traces of it were to be seen. The parietes of the ventricles were more thin than common, particularly the right.

Abdomen. — There was some water in this cavity, but not to any large amount. The liver was much enlarged and of a firm consistence. Its color was unnaturally dark, and on cutting into it, there was discovered a more granular surface than usual. The left lobe descended so low, as entirely to obscure the stomach from our view. Upon the external surface of the intestines were several dark, elevated, firm portions, indicating to us the existence of ulcers within.

The spleen, mesenteric glands, kidneys and pancreas were natural, — unless the last somewhat enlarged.

The mucous coat of the stomach was very thin, soft and red. All the membranous parts of the canal were in fact uncommonly thin, and so easily torn, that the scalpel was hardly used in the detachment of the whole intestinal canal from its attachments. They were simply torn apart by the hand.

Through the whole of the small intestines, the mucous coat presented, for the most part, the same appearances which I have described as existing in the stomach. There were also from ten to fifteen ulcers, varying in size from that of a ninepenny piece to that of a half dollar, and presenting more of a tubercular appearance, than I had ever before seen. In one spot I observed a perfect and entire tubercle as large as a small pea, but of a more oblong shape, and of a tarnished white color.

The large intestines were also much diseased, their coats having become very thick; — but I unfortunately neglected to examine these parts with sufficient attention to obtain a proper knowledge of the same.

Remarks. — 1st. One practical advantage to be derived from this examination is, that pneumo-thorax does not always exist when the metallic tinkling is heard. With this latter affection there is usually combined an effusion into the cavity of the

pleura, and hence is to be derived the indication for an opening into the thorax. But were we to think proper to operate in such a case as the above, we should find ourselves much in error. Laennec mentions two cases similar to this, (37, 38, 1st. edit.) entitled "Tintement Metallique dans une vaste excavation tuberculeuse."

2d. The little tubercle, which I have mentioned to be in an entire state upon the surface of the mucous membrane, was worthy of remembrance; as it seems to show that the disease in the alimentary canal, so often observed to come on at the latter end of phthisis, probably begins in the glands.

CASE IV.

PHTHISIS. METALLIC TINKLING.

Jan. 25. 1830. — J. M., a baker, who had led an intemperate life, entered the Massachusetts General Hospital eight days since. He had been troubled in his chest for the last two years, the attack having commenced in his left side. Having travelled from New-York in the steam-boat, during the preceding week, his disease was aggravated, and on this account he entered the hospital.

His first appearance was that of a man in the last stage of phthisis. His strength was much exhausted and he was very considerably emaciated; pulse 120 to 130, hard, during his whole residence in the house. His right side only was fairly examined by the stethescope, as he laid in the corner of the room, with his left to the wall, and was too weak to admit of much disturbance. Under the right clavicle, pectoriloquy was distinctly heard at certain times, at others less distinctly. I forgot to remark, above, that his expectoration was decidedly

purulent and rather copious; and once or twice I observed a little blood in the cup. Under the right clavicle was also heard the mucous rattle at times; at times, too, a metallic gurgling, not exactly the "tintement metallique;" but a sound which was compared by the physician to the boiling of a fluid in a thin metallic vessel. It gave to my ear, a distinct assurance of air bubbling through a fluid. In the lower part of this side, the crepitous rattle was heard.

Autopsy.

Thorax.—On raising the sternum with the ribs, which had been sawn off behind the cartilaginous portions, there were found strong adhesions of the right lung, through its whole extent, to the surrounding parts. Whether there were adhesions upon the left side, I do not know. In the upper lobe of the *right lung*, there was an extensive abscess, with very thin parietes, in the upper part, so that it was unfortunately torn open, in the attempt to detach the organ from the adherent pleura. I say unfortunately; for it was desireable that it should not be opened until we could carefully observe it, and ascertain if there was any air in the cavity. This abscess continued down almost the whole extent of the upper lobe, irregular in its shape, and with parietes increasing in thickness, as we cut toward the diaphragm. I should rather say this was the case generally, for there were one or two spots, especially one toward the mediastinum, which were so thin, as to have been penetrated in the dissection. This abscess contained a reddish fluid, of middling consistence; but, whether it was colored by the blood effused during the dissection, or before death, is uncertain; I should rather incline to the last opinion. The whole of the lobe was not included in this abscess; and the portion excluded was of a whitish gray color, condensed, not admitting the air. The lower part of the pari-

etes of the abscess, which excluded the portion of the lung just mentioned, from its cavity, was very regular and striking, being nearly an eighth of an inch thick, of a cartilaginous appearance and firmness, rendering very obvious the good end answered, by the adhesive process, in the original inflammation of this part. The two lower lobes were mostly in the first stage of inflammation, presenting on a section of almost every part a scarlet color, and much blood and air following the knife. There was one small abscess in the lower lobe filled with a true purulent fluid. There were also two groups, each of the size of a marble, composed of small granulated bodies, which did not present to my eye the appearance of common tubercles, but I did not accurately examine them. We now detached this lung with its bronchus, and having inserted a blow-pipe into this tube, it was found that the air passed freely through six or eight fair openings, into the large cavity first described.

The *left lung* was likewise much diseased. There were in the upper lobe two abscesses, one of very considerable size, containing a purulent material, precisely similar to what was expectorated during life. This lobe almost entirely, and the lower part of the lower lobe, were composed of granulated bodies, which caused a rough surface to be presented on the cut surface. These bodies were of a light, almost white, or yellowish-white color; and the organ was not so much compressed by them as to prevent the admission of air; for bubbles of air followed the course of the knife, in every part. I saw none larger than common sago, as we see it; but one gentleman told me since, that he met with some much larger. The appearance was not unlike that described by Laennec, under the head of the second stage of inflammation; excepting that instead of "les petits grains rouges," these were white.

He is describing the appearance after death, in an acute pneumonitis. May not this be an analogous state of things arising originally from that cause ; but from the habits of the subject, never having been restored by the healthy and natural processes usually instituted for the purpose of restoration ? Or, in other words, was not this state of the organ, the result of a previous common inflammation, modified by its long standing, and its want of disposition to recovery.

By the Editor. — I will only add, in regard to this case, that the observations, collected by the writer at a later period, present similar facts, as to tubercles, but they are related in different terms. It is on account of the metallic sound, attending large vomicæ, that I have admitted this and the preceding cases.

CASE V.

PHTHISIS WITH PNEUMO-THORAX.

Oct. 18, 1830. — S. L. entered Massachusetts General Hospital, on August 13th. For two years he had had some difficulty in his chest, of which pain in the left side was one of the symptoms. A few days before entrance, there had taken place a somewhat acute attack, the violence of it being mostly over at this time. His pulse I observe to have been but seventy-two until sometime in September; — at this time there came on symptoms of a pretty acute pleuritis, which was met by active treatment, but not entirely overcome. The left side remained dull on percussion, and the murmur of respiration was not heard there, while it was puerile upon the right side. This state of things lasted until within the last ten days; —

I had not seen him until then. From this time the following symptoms and phenomena were observed. Dyspnœa, not striking, — can lie only upon left side, some cough and a little expectoration, not of purulent matter, — pains shooting through the left side, and soreness of integuments there on pressure, — intercostal spaces of left side, raised even with ribs, and œdema of that side; left thorax not moved in respiration, and apparently larger than right, though not so by measure. Murmur of respiration puerile on right side; wanting in every part of left, unless just below clavicle. On percussion, more full upon right than upon left thorax. Flat on left thorax, except on the breast, and especially the upper part, where it was not quite flat. In the course of a few days the metallic tinkling was heard by the physician just above mamma. I was not sure that I heard it at any time. By succussion, the sound of a fluid in motion, was observed in the thorax. This symptom varied, sometimes being entirely absent, and the sound was not at all times equally loud. I heard it but once; it was then most unequivocal. The man told me he felt the motion of the fluid in his chest, when he made any effort to change his position; — but added that this had not been the case till within the last month. The impulse of the heart was entirely wanting in its natural position, but was felt under and rather to the right of the sternum. Two days before his death, I was very confident I heard the murmur of respiration down to the mamma of the left thorax. The intercostal spaces also were less elevated then than before. He had walked out till within ten days of his death, and preserved his appetite, although he was taking digitalis in pretty large doses. His pulse was only seventy-two, the morning of his last day. He had been sinking, especially in strength, for a few days rapidly. His respirations on this morning were

but fifteen in a minute. This man was by trade a brick maker, aged 24.

Autopsy.

External Appearances. — Great emaciation. Left side of chest apparently larger than right; — intercostal spaces much less elevated than a few days since, — but more so than on right side. Left hypochondrium more prominent than right. Ensiform cartilage turned to right side, so as almost to lap over cartilages of false ribs. On percussion, report as before.

Thorax. — The trachea was now secured by a ligature previously to puncturing the chest. On puncturing between the fourth and fifth ribs of the left thorax, about on a line with mamma, the flame of a lighted taper, held at the orifice, was seen to flicker very perceptibly for some seconds on compression of both sides the chest. The gas which escaped did not take fire, and had not the smell of sulphuretted hydrogen. On puncturing the right thorax, the air, flame and smoke were at once sucked in and the flame was extinguished. The sternum being raised, the right lung was seen collapsed, apparently healthy. The heart and large vessels were under the right half of the sternum.

The *left thorax* was almost filled with a fluid which was estimated to be three quarts in quantity; — it was a darkish, serous pus, or purulent serum, with large masses of coagulable lymph floating in it, and at the bottom a large quantity of porraceous matter. I could liken this fluid to nothing but soup; the appearance was to me novel. After removing two-thirds of this fluid, a blow-pipe was inserted into the trachea, and the lungs inflated, in order to ascertain, if there was any communication between the lungs and the pleuritic cavity. In a few minutes bubbles were seen to rise in the

upper part of the cavity, evidently proceeding from the escape of air at that part of the lung. The *left lung* was compressed close to the mediastinum, to which and to the pericardium and diaphragm it was adherent. The apex of the lung, in which a small abscess was situated, (which abscess had been the medium of communication between the bronchia and pleura, by opening into this last cavity,) was not adherent to the pleura, but remained disengaged. The substance of the organ thus compressed was of a dark color, firm, not admitting the air in any part that I saw, although others thought it expanded under the blow-pipe.

The *right lung* was slightly adherent in some parts to the pleura and pericardium. It contained tubercles scattered through its different parts, and little black elevated granules; also in some parts of its surface were livid sulci, looking like a contraction of the pleura inwards, in consequence of a cicatrization. In feeling and incising these parts, there were evidently tubercles underneath the pleura and quite superficial.

The heart was firmly adherent to the pericardium throughout its whole extent. Internal cavities of heart not examined.

Remarks. — 1st. The course of the disease in this man appeared to be the following: —

There had been formed, on some previous occasion, a small tuberculous abscess in the apex of the left lung, which had opened both into the bronchia and pleura; and its contents, being effused into this last, caused a violent pleuritis, which could not be overcome by the most vigorous depletion. Hence all the subsequent symptoms.

2d. I would observe that this is the fourth case within a year, where I have seen the pericardium adherent to the heart. It is proper that I should take warning from this, that

the disease is not very unfrequent, and is to be thought of when there exists any thoracic inflammation.

3d. This case shows that inflammation of the pericardium will often go on secretly, without betraying any such prominent symptoms, as we might naturally expect. This man in his detail of symptoms, mentioned none that would indicate that this disease had ever occurred. We are not, hence, to conclude there were none such; but if they had been very prominent and severe, he probably would have mentioned them.

4th. The very slight degree of dyspnœa, which this man evinced, are very well worthy of notice, as there existed such extensive and serious disease.

By the Editor. — This instance of pneumo-thorax is the first, which was ever observed in our hospital after the work of Laennec was known to us. Though the hospital records would furnish many more details of the case, I have preferred to give it in the words of the young reporter; since the facts stated by him are sufficient to make it intelligible to those who have read the work above-mentioned, and I trust that all medical men have read and studied it.

CASE VI.

PHTHISIS WITH PNEUMA-THORAX AND CHRONIC PERITONITIS.

Jan. 5, 1831. — Mr. B. æt. 45, entered the House of Industry, at South Boston, about two months since, with some symptoms of advanced thoracic disease. I saw him a few moments about three weeks ago, when I observed that the

right thorax generally was dull on percussion, and that the murmur of respiration was generally wanting on this side. On the third of this month, two days since, I was again invited by Dr. Fisher, to see him, as he presented some new and interesting phenomena.

I forgot to mention that on the first visit, I thought I heard an ægophony, about the lower angle of the right scapula. He had now the symptoms of pneumo-thorax with hydro-thorax.

1. The right side, as he sat up, resounded on percussion in the upper part, indeed over two thirds the whole side, much louder than the left; — on the right side the murmur of respiration was not audible except close to the spine, where it could be heard for almost the whole length of the chest; — on the left side it was more audible than usual; — indeed, Dr. Fisher says he heard the respiration distinctly upon the left side of the sacrum.

2. On succussion, the sound of a fluid shaking against the thoracic parietes was very obvious, and tested by frequent trial.

3. About the upper part of the right scapula, the "tintement metallique," was very distinctly audible.

Autopsy.

External appearances and observations. — The right side, to the eye, both on front and back view, appeared very evidently larger than the left. On measurement, however, over the most protuberant part, it was found to be scarcely half an inch larger than the left.

The experiments of percussion and succussion yielded the same results as before death. On shaking the body and applying the hand to the right side, a very distinct fluctuation was perceived.

On examining the abdomen by percussion, the right iliac region sounded flat; and a tumor was felt directly in the situa-

tion of the cæcum, or commencement of the colon. Head not opened.

Thorax. — After tying the trachea, as firmly as possible, we punctured the right thorax between two of the ribs, and there immediately issued a stream of air, which had an evident effect upon the flame of a lighted paper held over the spot.

On laying open this right cavity it was seen to be one-third full of a serous fluid, with some few shreds and masses of coagulable lymph. The lung of the right side was compressed closely, and adherent by recent, or at least slight, adhesions for the most part to the spine. The rest of this right cavity was filled with air. Having removed a portion of the liquid we next inflated the lungs by a blow-pipe in the trachea. The right lung expanded itself to a certain extent, showing plainly that it admitted air during life. After both lungs were quite filled with air, we began to see bubbles at the upper part of the right side, arising in rapid succession and quite numerous. We had now two of the proofs of the existence of air in the pleuritic cavity. We were now to look for the point, at which the air passed from the lungs into this cavity. This we found by a careful dissection of the upper part of the upper lobe; — passing a blow-pipe into several of the ramifications of the right bronchia, we at last saw and felt the air issuing from a very small point on the surface of the lung. On further dissection of this, it was found to be an opening from a very small and superficial abscess, not larger than half of a common pea. It must, probably, have been somewhat, though not very much larger, before the lung had become thus compressed. Both lungs were filled with tubercles in different stages of advancement.

Upon the surface of the heart there were three of those white spots, one an inch square in size, which have been thought by some to be effusions of coagulable lymph. The pericardium contained about three ounces of serum.

Abdomen. — *Stomach* — various spots of mucous coat reddened, — no thickening. Intestines not distended; — rather under than above the natural color; — adherent to each other by old bands, and to the omentum and peritoneum above.

Serous coat in many places studded with small tubercles. We did not look at the mucous membrane of any but the ileum at its cæcal end, the cæcum, and the beginning of the colon. Over the cæcum and colon at its commencement was a tumor, somewhat larger than a common horse-chesnut, surrounded by a mass of effused water, in consequence of an adhesion involving some of the contiguous small intestines. This tumor was white, firm in its texture, looking, as was observed by a physician, like the material which he had seen, as a matrix of tubercles of the peritoneum. The coats of the ileum to the extent of six inches, of the whole cæcum and of a part of the colon were greatly thickened and indurated; their calibre, consequently, being much diminished.

The *spleen*, as I was informed by Mr. H., for I did not see it, was preternaturally soft; seeming almost like a sac of the peritoneum, containing a fluid.

Remarks. — It is worthy of notice that this man had had no great trouble in his bowels since his entrance at the House of Industry. So far from being costive, which we should have expected from the appearances on dissection, his bowels were regular without medicine. Dr. D. informed me, that he had at one period, diarrhœa, since his entrance, and he also remembered to have heard him complain once of pain in the right iliac region.

From the appearance I should certainly have expected occasional obstinate obstruction of the bowels, alternating with diarrhœa.

CASE VII.

PHTHISIS. SUDDEN DEATH.

Nov. 30, 1830. — Dr. — invited me, this afternoon, to attend the examination of Mrs. A. æt. 45, who had died of phthisis. He had seen her only three or four times, she having been under the care of a quack during all the preceding part of her sickness. She had the ordinary symptoms of phthisis; those which belonged to her individual case, and were worthy of note, are the following.

1. There was a very distinct pectoriloquy, upon and below the right clavicle.

2. Whenever she turned herself upon the left side, she began at once to cough, and to spit purulent matter very copiously.

3. She died suddenly, as if from suffocation; which Dr. — had previously suggested would be very likely to happen, from the circumstance of this large abscess being so near the great branches of the trachea, that these might be stopped up, by its contents, on any sudden or violent motion of the body.

Autopsy.

Thorax. — On raising the sternum, the left lung was seen projecting over to the right side, its edge being beyond the sternal end of the right clavicle. *Left lung*, especially the upper lobe, filled with small, crude tubercles, not suppurated. *Right lung*, — very large abscess in upper lobe, extending down into second; whole organ impermeable to air.

Abdomen. — Liver much enlarged, — stretching over epigastrium, and from right hypochondrium down for one or two inches below the *crista ilii*, its lower edge being covered by that bone. Other viscera not examined.

Remarks. — 1st. On feeling of the abdomen, I was so much struck with its firmness and apparent solidity, that I was anxious to discover the cause. It seemed to me, that the liver must be enlarged, for the feeling was altogether that of a solid organ, and I thought it a good opportunity to test the correctness of this sensation. I was much gratified, therefore, to find the organ as it was.

2. This case was not a common one, inasmuch as the woman was forty-five years of age. I inquired of her husband whether she had borne many children, and whether she had nursed them. He answered, six, and that she had nursed them. This may be only a coincidence; but I thought it well to record it.

By the Editor. — The reporter was probably aware of the many points of interest in this case, which his statement throws no light on. At a later period of his life, his interest in the subject would probably have led him to obtain answers to some other questions, though he might not to all, which could be raised. The case is given, imperfect as it is, because it explains the sudden death.

CASE VIII.

TYPHUS. SUDDEN DEATH.

Oct. 28, 1830. — E. D. a woman, about 20 years of age, died on the 26th, very suddenly, in the evening. She

had fever, during which she had some soreness of the abdomen, and tenderness on pressure; within the last few days some hemorrhage from bowels; in whole about three pints; the greater part of this five days before death. On the morning of the 26th, the physician observed that her pulse was very small; she was otherwise much as usual; her countenance flushed; she had rather less appetite, but was, in aspect, rather more bright. He told me at noon of this smallness and weakness of pulse, saying, that it made him look at her carefully, but she said nothing which corresponded with it. On the evening of that day, after a long nap, she awoke, and asked for water; the nurse went to get the water, and, on returning to the bed, found her dead.

Autopsy.

The physician's remarks, before looking at the diseased parts, were as follows. "In head, probably no disease. In chest, some old trouble about the heart, at most denoting feebleness. During the fever, some slight marks of disease in left thorax, which had ceased; perhaps there may be effusion into lungs or pleura. In abdomen, — disease, probably, within intestines. There may be disease in peritoneal cavity, but the tenderness on pressure was not like this, and there probably is none. Blood discharged by stool was probably from ileum, or large intestines. Is there ecchymosis there? Probably, pretty certainly not. This there must be, if a vessel has been ruptured; which, probably, is not the case. Probably, disease is in the mucous membrane. There may have been concealed hemorrhage elsewhere."

I had thought whether the heart might not be found collapsed and empty, as in Chevalier's cases, and that this was the cause of the sudden death.

External Appearances. — On percussion, chest resounds well every where; emaciation not great; no remarkable appearance of bloodlessness. *Brain*, natural throughout.

Thorax. — A quantity of dark red colored serum, without coagula, in both pleural cavities, evidently effused from exhalants. Same in pericardium, except much less dark.

Right ventricle of heart *empty*, or *nearly so*, — *collapsed*, *flaccid*.

Abdomen. — Small amount of similar dark, bloody serum in peritoneum. Stomach and duodenum natural. In jejunum, one or two small ulcers in mucous membrane. In ileum, especially toward cæcum, and particularly at the junction of the two, for about six inches, ulcerations of mucous membrane, of various sizes, an inch square and smaller. I observed one or two spots in which nothing but the peritoneal coat was left, which was very evident upon holding the intestine against the light. Also were seen, in two or three places, the commencement of the disease, viz. an elevation, redness and hardness of a mucous gland, apparently, more certainly a small, elevated, hard, red pimple upon the mucous coat. The edges of the ulcers were full, rather dark, and somewhat hard. In the mesentery, connected with the lower part of the ileum, there were shown, very finely, the enlargement and hardness of the mesenteric glands; also, in another part, the enlargement of the vessels leading to a collection of ulcers, which were very beautifully displayed. Every moment I was reminded of Dr. Bright's beautiful plates, the truth and accuracy of which were here most fully confirmed. The dark, red, livid appearance on the peritoneal coat, opposite to the disease within, was very striking. There were three spots upon the lower surface of the vagina, of about half an inch diameter,

perfectly black, looking very like sphacelus. The womb also was dark colored. There was an hydatid attached to the left fallopian tube.

Remark. — The sudden death seemed to arise from the failure of a supply of blood to the heart. See London Med. Chir. Trans. Vol. I, p. 157 ; paper by Mr. Chevalier.

By the Editor. — I have inserted this case only on account of the sudden death, and the appearance noted in the heart on dissection. My young pupil had conjectured, more truly than I did, the cause of the sudden death ; though some years previously, and after reading Chevalier's paper, I had seen a case of sudden death, with similar appearances of the heart. The phenomena in the intestines will be justly estimated at the present day, at least by those who have read the work of M. Louis on typhus fever. Some subsequent cases in this work will detail these appearances more fully. I could furnish more full notes of this case, which would show its character more unequivocally, but prefer to leave it as it was written.

CASE IX.

RUPTURE OF GALL-BLADDER.

Feb. 8, 1831. — J. L., Esq., æt. 86, was taken sick on the sixth, and died in twenty-eight hours from the first seizure.

On eating a small piece of brown-bread in the forenoon of that day, he felt some pain at the stomach, to overcome which he took a little brandy and water on his return home. At two P. M., without paying any regard to this occurrence of the morning, he took dinner as usual. At half past two P. M. he

sent for a physician, who found him suffering most agonizing pain at the epigastrium, with his countenance, pale, shrunk, ghastly, looking exactly as if he had received some great injury; as a man would, for instance, if he had received a shot in the abdomen. He got at once two or three successive doses of ipecac. after which he vomited, but not very freely, a part of his dinner. Still the pain was not in the least checked, but remained so severe as to cause constant and loud cries for relief, though a man of the greatest fortitude. He now began to take laudanum, of which he got about seven hundred drops before six P. M. Of this he vomited a part, retaining, perhaps, a full half: after this the pain was somewhat lessened, but not gone. On his return, at seven, finding this mitigation, and hoping that another full opiate would complete it, the physician gave two hundred drops which was retained entirely. The pulse during this time were not accelerated, nor in any way greatly altered, still retaining the firm feel of an old man's pulse. In the course of this visit, when moving in bed, Mr. L. suddenly complained of a severe pain in the right hypochondrium. As the pains were not entirely removed by this last opiate, the physician thought best to bleed him, and took away ʒ xiv, not being stopped by fainting, but by the sigh which frequently precedes that. The pain was now much more relieved. In the course of the evening the physician was about to apply a sinapism over the right hypochondrium, where he had complained of this sudden pain, but Mr. L. said, that the pain was not there, but all down that side of the abdomen, and more especially in the groin. This led to an examination of this part, more accurately, in order to ascertain if there were any marks of hernia, but none were found. This side was somewhat tender on pressure, but very little however. Mr. L. said, that many years ago, thirty or forty, he was sick, and had always supposed

since that time, that his liver was adherent to the surrounding parts. Whenever he took cold, or in any way became a little disordered, he would have some pain in the right hypochondrium ; he was, also, in the habit of lying upon the other side, as he felt some uneasiness when on the right. These symptoms, however, he described as having been very slight, never being sufficient to affect, materially, his health, or comfort. Even after the bleeding, neither the pain in the stomach nor that in the right of the abdomen were completely overcome. He continued through the night to vomit occasionally, until two A. M., after which he had some sleep. On the morning he was more feeble ; — his pulse was very weak, but he did not suffer much pain ; — at twelve, his pulse was no longer to be felt at the wrist, and he died at about six P. M.

Autopsy.

Abdomen. — Distended. — Within this cavity was found a large quantity, perhaps a pint or more of bile, mixed with a small portion of blood. About the gall-bladder, and between this and the duodenum, was a large quantity of grumous and half coagulated blood. On dissecting through the capsule of Glisson, and tracing the ducts to the gall-bladder, we found a hole of one-third of an inch diameter in this viscus ; — and its coats were very soft, tearing under the least pressure.

The physician thought that the appearance of the peritoneal coat of the intestines was not more red than natural ; — but it certainly seemed to me that, beside the deep and livid red color, which we very often see in the intestines, there were also some patches of a much more florid and brighter shade, which gave evidence of a commencing inflammation. The stomach was healthy.

Remarks. — On looking through the index of Morgagni de Sedibus et Causis Morborum, I do not find reference to any

cases of rupture of the gall-bladder. Lieutaud reports one case, in which, subsequent to a swelling in the right hypochondrium, a fistulous opening was formed between the gall-bladder and the external parts, through which pus and bile were constantly effused. He likewise has collected two cases of rupture of the gall-bladder into the cavity of the abdomen, in consequence of a blow upon the right side. He does not seem to have met with any case like that of Mr. L. The cases above referred to, are in Vol. I. p. 211. Baillie says, he once saw a gall-bladder, in which was "one ulcer which had destroyed a part of all the coats." (Morb. Anat. works by Wardrop, Vol. II. p. 215.) He does not give any account of symptoms, or other morbid appearances in this case. See a case quoted by Abercrombie on Stom., etc., p. 391, from the Nouveau Journal de Med. 1821.

CASE X.

RETENTION OF URINE.

Jan. 26, 1831. — Examination of Miss H. æt. 3, by Dr. —. This child had fever for about a fortnight, — some appearance of slight bronchitis at the commencement, — always a very rapid pulse, and no symptom of cerebral disease; — no especial difficulty in alimentary canal, — bowels easily evacuated, and no diarrhœa. Within the last four days a tumor appeared in hypogastrium, which gradually increased in size, till it filled the whole abdomen. On inquiry the physician was assured the urine had passed naturally and abundantly. The day of her death, she was freely purged with Ol. Croton, gtt. 1. — This tumor was tender to the touch, not resonant on *per-*

cussion, of a somewhat firm feel. Such is the account, Dr. — gave me before the examination.

Autopsy.

External appearances. Surface pale, bloodless; — body not much emaciated; — tumor in hypogastrium yielding, in one spot especially, to the pressure of the finger, — and giving the idea that a fluid was contained within.

Abdomen. — On opening this cavity by a crucical incision, the bladder was presented to view, elevated out of the pelvis, as high as the umbilicus and much distended. Ureters, especially the left, greatly distended; — pelvis of left kidney distended and full of urine; the urine being drawn from the bladder, was found to be somewhat more than half pint, and had a dark brown, not very copious sediment. I examined the whole tract of intestines with my fingers, carefully examining the appearance of each part, to see if there was any indication of disease of the mucous membrane. There was none such in any part. There were eight or ten slight intussusceptions, evidently of very recent occurrence. The internal surface of these, and of the stomach were not examined. — *Liver* healthy. — Thorax, — not opened; — resounded well, by percussion, in every part. — Head not opened.

Remarks. — 1st. On farther inquiry of the old lady who had taken care of the child, it was ascertained; 1. that about four days since, the child went twenty-four hours without passing any urine. 2. That it was on the following day the tumor began to appear. — 3. That ever since that time, the urine had been passing constantly, as every diaper which they removed was wet. 4. That the child had not, at any time within these four days, passed a quantity of urine at once in a vessel, but that the appearance of the cloths alone was evidence of its evacuation. Here is ample evidence of retention in the first instance, and consequent incontinence afterwards.

2d. I may learn from this that when a tumor appears thus suddenly in the hypogastrium, the bladder is to be suspected.

3d. I may also learn, that the evidence of the patient, or the nurses, in regard to free evacuations of the urine, in such cases, is not enough. We should satisfy ourselves in one of the following modes; — 1. By the fact that the patient has passed a quantity of water, at one time into a vessel; or, 2. By the introduction of the catheter; which last mode is the most satisfactory. 3. By percussion above the pubes.

CASE XI.

TYPHUS FEVER.

Hospital La Pitié. Ward St. Paul, 3.

Under the care of M. Louis.

Jan. 6, 1833. — Defaint, æt. 24, a manufacturer of oil; born at Trefaille, has been in Paris six weeks; never sick till now, not had even catarrh; of strong, robust aspect; hair reddish, eyes blue, complexion ruddy; has worked much harder since in Paris, than before. On the first instant, and previous days, had worked and slept as before, with the same diet; had regarded himself as well, but for five days he had been very thirsty, his food was less grateful than usual, though he did not lessen it much, and his strength was a little diminished. On the second instant he took breakfast as usual, and worked till noon, when he was seized with diarrhœa, accompanied by pain in bowels; had twelve dejections, very watery, before evening; at same time had nausea, though no vomiting; also tremor and chills; went to bed at once but could not get warm; according to his own sensations, did not get warm that night, nor indeed has he felt warm since; especially his feet have been cold; every exposure to the air has occasioned a chill; from

the first, anorexy with increasing thirst. Also from the first day headache, dizziness, sight imperfect, noise in the ears, and slight deafness. Little sleep on the night of the second instant; and none since, which he attributes to the headache and frequent borborygmi. Pains in the loins and limbs, especially in arms, since third; slight cramps once in left leg; epistaxis yesterday for first time, slight; none since; urine abundant as he thinks; no sweat; he has felt that the abdomen was hard and swollen; pain in bowels at times with borborygmi, which he has both heard and felt. Has kept his bed from the second instant. Slight cough since the third, without expectoration; respiration somewhat embarrassed, owing as he thinks, to some difficulty in lower part of the trachea, though he does not feel any pain there, and in epigastrium; he has not any proper pleuritic pain, though he feels something prick him in the side when out of bed; but now he does not feel it on fullest inspiration. He thinks he has not been delirious. Some palpitation from the beginning. Entered yesterday; and part of the foregoing was collected yesterday.

Present state, as noted Jan. 5, two P. M. Has been in the hospital an hour; walked here supported by the arm of a friend, and thinks he could not have walked alone; was a quarter of an hour on the way, walking very slowly, and was greatly fatigued on arrival. Expression not very unnatural; face red and violet, warm, not very hot; eyes injected, suffused; eyelids heavy; tongue not very moist, with whitish coat, thin at centre, reddish at tip; thirst strong; deglutition easy, except a little pricking on swallowing saliva; abdomen large, sonorous on percussion and painful on pressure over right iliac region, not so over left; no rose pimples; spleen not felt on examination, nor on percussion is there any flatness over it; on the contrary on percussion on left side, lower part, very sonorous; no borbo-

rygmi at this moment. No appetite; slight nausea; four liquid dejections to-day, twenty on third and seven yesterday; none of them bloody, so far as he knows; pulse 90, not large nor strong; skin hot, though it does not feel so to him; he complains of cold feet and constant trembling; cough rather frequent, producing pain in abdomen, though not in any limited spot; voice not half so strong as in health; respirations 12 in a minute, apparently easy; on percussion and auscultation over chest, everywhere natural, so far as can be decided by the imperfect examination which he permits; no rhoncus. Headache not severe, more dizziness and pulsation in head, than pain; a buzzing in the ears, (tinnitus aurium), especially on rising up; suffers from noise though not from light; says his mind is slow, and so it appears; talks with great difficulty; prostration not extreme; can rise to his seat with comparative ease; pains over trunk and limbs as if beaten; sensibility of surface everywhere increased.

Jan. 6. Half past three P. M. p. 100; skin hot, rather moist, than dry; perfect prostration.

(Venesection ℥ xiv. Seltzer water.)

Jan. 7, A. M. Was bled ℥ xx; no buff on the blood; p. 96 yesterday, and to-day, regular, small; tongue moist, white at centre, natural on edges; face flushed, skin hot and dry, not burning; same difficulty in swallowing saliva; four dejections since afternoon of fifth; no pain in abdomen, none on pressure anywhere; a little tympanitic in the middle; no rose pimples; feebleness greater; dislikes motion and questions; answers shorter; memory good; cough not very frequent; respiration and sound natural on auscultation and percussion. He insists very much upon the injury he suffered from drinking a great quantity of water for five or six days, and to this he attributes his loss of strength and disgust for food. Little sleep, no delirium.

(Venesection ad ʒ x, vel. p. r. n. Enema of flaxseed tea. Seltzer-water. Liquid farinaceous diet.)

Jan. 8. — Eight ounces of blood taken ; this covered with a soft buff ; coagulation imperfect ; p. 96 regular ; heat a little elevated ; skin not dry ; tongue less moist, less pale at edges, more coated ; no headache, but dizziness always ; cannot rise to his seat without help, and some nausea follows the effort ; frequent dry cough ; meteorism rising to epigastrium. Great agitation last evening; no delirium.

(Enema as yesterday. Gum potion with two drachms of syrup of white poppies.)

Half past four, P. M. — Vomiting of bile immediately after morning visit ; none since, nor dejection. Increase of flush, heat and dryness, also of headache and feebleness ; p. 96 reverberating, or with a double stroke, hard ; resp. 36, unequal ; occasional sighs ; cough frequent ; abdomen very sonorous on percussion ; great pain in it. Inclined to groan and to despair.

Jan. 9. Morning. — No delirium in night ; looks and feels much brighter ; p. 96 ; tongue nearly natural, rather redder at edges ; two or three dejections ; no pain in abdomen, less meteorism ; respiration pure ; rising to seat does not now produce nausea ; tinnitus aurium continues ; no sweat, nor epistaxis, nor rose pimples.

(Syrup of Gum. Seltzer-water.)

Half-past four, P. M. — Aspect fallen ; stupid ; skin hot ; subsultus tendinum ; p. 96, feeble ; resp. 36. He feels as strong as in the morning, but evidently is more prostrated.

Jan. 10. — Tongue a little more coated ; two dejections ; no pain in abdomen ; less dizziness ; on his right side ; expression good ; no delirium ; cough as yesterday ; p. 92, regular ; a little subsultus tendinum.

(Solution of syrup of gum, two mugs, with three drachms of syrup of white poppy.)

Four P. M. — p. 96; resp. 36; asleep; skin not very hot; cheeks less flushed than last evening; occasional contractions in muscles of face and limbs.

Jan. 11. — More sunken; feels weaker; tongue not so well protruded, a little thickened or swollen; great thirst in night; two or three dejections; little meteorism; abdomen scarcely sensible to pressure; spleen not felt; no sweat, nor eruptions; no delirium; tinnitus aurium continues; more deaf; heat not great; p. 100, rather small, regular; respiration pure; cough more frequent and harder.

(Solution of syrup of gum. Seltzer water. Gum potion. Enema.)

Jan. 12. — Tongue less moist, red about edges, trembling, protruded imperfectly; not many dejections, though one involuntary; abdomen distended, especially at epigastrium; no rose pimples; p. 88, a little fuller; heat rather greater; respiration higher; more stupor, roused with difficulty, unwilling to answer; more deaf; no delirium; heavy and stupid through the day yesterday.

(Same prescription.)

Jan. 13. — Stupor continued yesterday; no delirium; tongue red, slightly moist, painful, twice as thick as at entrance, protruded with difficulty; thirst; two dejections involuntary; three rose pimples, not well marked; abdomen more distended; p. 96; dry heat; resp. 28, sometimes a little high; cough the same; pains every where; face a little emaciated.

(Same prescription.)

Five, P. M. — Asleep on his back, roused with great difficulty; respiration pure, loud in front at the right; at the

left expansion very slight, and there sonorous, sibilant râle; the same result on both sides behind.

Jan. 14. — Tongue softer, moist, not red, nor painful; two dejections involuntary, and one copious, voluntary, while bed was making this morning; meteorism the same; no delirium, but more stupid and more deaf; does not speak, answers by signs; no pain; p. 94, regular; no subsultus tendinum; resp. 30.

Five, P. M. — p. 96; heat of skin much greater, acrid; much flushed; sonorous, sibilant râle in front, on both sides. Lies most on right side, indeed never noticed on the left.

Jan. 15 and 16. — Symptoms not much altered; the rose pimples more distinct and more numerous; on percussion sufficiently sonorous back and front, but râle the same, and at the right some mucous râle.

(Same prescription.)

Jan. 17. — Got up during night; attitude natural; tongue red, moist, thick; impatient; prostration; p. 106, small; an imperfect sub-crepitous râle on the right, back and front.

Jan. 18. — Tongue less red; three dejections; meteorism much lessened; no rose pimples; deafness continues, but stupor less; p. 100, small. At evening symptoms worse.

Jan. 19 and 20. — Generally getting worse; delirium in night of 19th and the next morning.

(Seltzer-water. Gum potion. Enema.)

Jan. 21. — Was up three times in night, delirious, talking much when in bed; much flushed, otherwise face rather natural; some spasmodic motions in it; subsultus less; p. 108, small; no sudamina; meteorism rather less.

(Cataplasm to feet. Same prescriptions except the enema.)

Jan. 22. — Delirium increased much yesterday and continues now, though less in night; pulse getting more frequent and more feeble; more cough; arms rigid, that is, make some resistance to motion and remain nearly as they are placed, even resisting the force of gravity; this symptom observed at evening for six days and now in the morning; rose pimples on trunk getting livid; hands also livid; last evening pains in and running from right ear. Impulse of heart feeble, and physical signs of difficulty in lungs increasing.

Four, P. M. — p. 120, very feeble; resp. 36, same as for several days; constant tremor of tongue and lower jaw; when the lower jaw is depressed, tries to protrude tongue, but in vain; tongue dry; some stiffness in arms; motion of lower limbs automatic; on his back; stupid; discharge from the ear; great meteorism; complains much on examination of abdomen; face flushed.

(Gum potion with ten grains of aqueous extract of opium. Sinapisms to legs.)

Jan. 23. — Delirium all night; this morning they thought him dead for a while; on his back; paler; eyes half closed; almost insensible; p. 104, feeble; tongue dry, reddish; swallows liquids with difficulty and sometimes spits them out; upper limbs much more rigid; some tremor in the lower jaw; resp. 24, not high; cough frequent; sub-crepitous râle over the whole back.

(Same prescriptions. Quinine, &c.)

Jan. 24. — Last evening more sunk, symptoms worse. No delirium in night; now tongue moist, drawn out with difficulty and remains between teeth; p. 100, rather less feeble; tranquil, has not spoken during the night; less rigidity of limbs, except that after subsultus they became very rigid; all of them very rigid last evening; several involuntary dejections

in night; meteorism gone; abdomen well formed, depressed; no grimace when pressing upon it; face calm, eyes shut. In evening worse; muttering delirium.

(Same prescription.)

Jan. 25 and 26. — Bad symptoms increasing generally. Sonorous on percussion in front, decidedly more on the right than on the left. Respiration pure, or with very little râle at one time, on right in front; on left in front a blowing, (sifflante) and sometimes a sub-crepitous râle heard on expiration as well as on inspiration, also, the expansion seeming feeble and less superficial than on right. Behind, sub-crepitous râle both sides.

(Sulphate of quinine, gr. xxv daily. Lemonade with wine.)

Jan. 27. — Every day worse at evening than in morning. This day, p. 104, resp. 32, some strabismus, with unimportant amendment in some points.

Five, P. M. — Has thrown off the bed-clothes; panting, resp. 56, and at times more; p. 128, excessively small; some strabismus, pupils round, equal; suffers from a candle near his eyes; tongue half protruded, moist, brown on the back, not coated at tip; on percussion much less sonorous in front on the left than on the right; cough very frequent.

(Same prescriptions. Syrup of ether, half an ounce.)

Jan. 28. — Some amendment as to tongue, pulse, respiration, intelligence, expression, hearing and rigidity of limbs. No strabismus. Asks for food constantly. Excoriation about sacrum and hips.

(Same prescriptions.)

Jan. 29 and 30. — Same bad symptoms as before 28th, returned and increasing, except strabismus. No dejection for two days. Suffers from slight touch on chest and abdomen.

(Quinine omitted on 30th. Enema of soap and water.)

Jan. 31. — On back; protrudes tongue, trembling; expression more natural; rigidity of limbs rather less; p. 116, small, feeble, regular; deafness much less; does not oppose exploration of chest; cough still frequent.

(Dress excoriations with cerate covered by a little sulphate of quinine.)

Feb. 1. — Worse through the day and night; got up in night to the cabinet, alone; delirious; rigidity the same in morning.

Five, P. M. on back, expression changed since morning; cheeks red, excessively sunken; pupils dilated; eyes not fixed, but nearly so; moves arms freely and with comparative ease; not the least rigidity in the limbs; hears and understands better, attempts to answer, but speech unintelligible; skin very dry and warm; coughs from time to time; respiration high, regular, 60; p. 150, thready.

(Sinapisms to thighs.)

Died at seven, P. M.

Autopsy. Feb. 3, ten, A. M. thirty-nine hours after death.

EXTERNALLY. — No lividity any where; little redness on legs from sinapisms applied on morning of last day; over sacrum destruction of epidermis only; about right trochanter partial destruction of cutis, brown externally and separation at the circumference about ulceration. Nearly the last degree of marasmus; scarcely any fat under integuments; muscles of good color, not pitchy.

HEAD. — Some few drops of blood on external surface of dura mater; a very few granulations (glands of Pacchioni) along the longitudinal scissure; some cerebral veins slightly distended with blood in the posterior third only; in some part only slight infiltration under the arachnoid; none in front; pia mater is removed with difficulty, though of its natural consistence; this membrane injected moderately over the convolutions

only. Cortical substance natural; medullary substance, unequally, of a lilac color; no drops of blood upon its incised surface even after exposure to air for considerable time; one ounce of clear serous fluid in right ventricle; a little more in left, which is evidently more dilated; septum natural, firm. Corpora striata, cerebellum, medulla oblongata and every other part of the brain of natural color and consistence.

Chest.—Pericardium contains six ounces of citron colored, clear, serous fluid; right auricle greatly distended with blood; fibrinous clot in each ventricle an inch or more in length. *Heart* of ordinary size, its substance firm; left ventricle five lines in thickness, the right two lines. *Aorta* of ordinary size and color in its whole extent.

Left lung, does not reach quite to sternum; an old, cellular adhesion at the middle, over a small space; air vesicles dilated over the whole upper lobe, especially near the free edge, which is round instead of sharp; form of organ preserved; slight interlobular emphysema in the lower surface of this upper lobe; this lobe elastic, light, contains little frothy liquid of a reddish color, no tubercles, not granulated. Lower lobe hepatized; finely granulated in its whole extent; color red, more or less deeply; very little liquid and no air on incision; offering a certain resistance to the finger, which once overcome allows it to be easily penetrated; sinks in water. Bronchia of both lobes thin, transparent and polished; none dilated. Several little ecchymoses on back part, under pleura.

Right lung reaches to left side of sternum; adhesions on back part at middle and a little at base; upper lobe, air vesicles more dilated than left; edge round; longer but not so heavy as left; a little hepatization near its lower part. Middle lobe, on its external surface several longitudinal projections or elevations, one to two lines in breadth, semi-transparent,

elastic, evidently containing air, — interlobular emphysema. Lower lobe, on the back part and to the extent of two inches from the base, granulated; the same in two or three other small portions; the tissue of a more uniform deep red than in left lower lobe; does not sink in water; affords more liquid and is less pliable than the left; no puriform mucus in bronchia, which are healthy as in the left.

Neck. — *Epiglottis, larynx and trachea* natural, except an ulceration posterior to vocal chord on the right, and there a small orifice, a line and a half in diameter, whence pus issues.

Pharynx, on its posterior and lower part, four or five small ulcers, from two to four lines in diameter, where the epithelium and mucous membrane are destroyed, and the muscular fibres are exposed to view; one of these is beginning to cicatrize. *Œsophagus*, ten to fifteen ulcers in lower third, larger, even half an inch in length, equally deep as those in pharynx, and two smaller in the parts above.

Abdomen. — *Stomach*, a quarter part larger than common, containing yellow-green liquid, and some opake mucus, also yellow; interior surface unequally pointed in red, in patches of different sizes, most at the union of the great cul-de-sac and posterior face, but much on the anterior face, especially near the large curvature; veins seen beneath the mucous membrane, especially in the cul-de-sac; no part mamelonated; sub-mucous membrane infiltrated in great cul-de-sac; near pylorus a patch of a little blueish-gray color, and there the injection more in the mucous than in the sub-mucous membrane; mucous membrane thin in reddest patch; strips, five to seven lines in great curvature, ten to twelve in small curvature, two to three in anterior face, near cardia, over two or three inches in extent, three in great cul-de-sac; no partial thickening any where.

Small Intestines. In duodenum nothing remarkable, a little red near pylorus. Jejunum and ileum, externally, dark blue, or green; cut a little easier than usual; contain mucus above and pultaceous matter below, varying in thickness, of a yellow-green color, in some points tinged with blood. Internal surface, in its whole extent, of deep greenish-gray color, strongly marked on the valves; between the valves this color is in innumerable points, in the upper third, or a little below; thirty-three patches of elliptical, or Peyer's glands are seen, and of these, eleven are ulcerated; first patch in the third foot from the pylorus; fifth contains opake, white points, varying in size, and the rest have the same; they are all, except the first four, seen through the peritoneal coat, which is scarcely, if at all, thickened however; in all the eleven, which are ulcerated, the muscular coat is seen at the bottom, naked and thickened; the three largest are in the last eight inches; the two last are eighteen lines long, separated from each other by a little bridge of mucous membrane, one by three lines in extent; the first of the ulcers round, the others irregular in shape, as if torn on their margins, these margins projecting or raised more or less, the surrounding tissue being thickened; in the two last the muscular coat not uniformly exposed, as there, numerous, little, white lines, like thickened cellular membrane, are seen in the course of the fibres, across the ulcers at the bottom. Several small ulcers surround the large ones. Some solitary, or Brunner's glands, small, white, thin, without central points, in the last five or six feet. Mucous membrane very thin everywhere, the sub-mucous very little injected, in most places pale. Strips five to six lines in the first three feet; three to four in the parts below.

Mesenteric glands everywhere enlarged; some of the last as large as a filbert, and others nearly as large; the large ones

in aspect uniformly white, moist, rather friable, soft, granulated; those above black, dense and smaller; one parcel just opposite cæcum an inch and a half in breadth, composed of three or four glands, form a pink, homogeneous mass, soft, surrounded by puriform matter. No fat in mesentery, nor in omentum.

Large intestines contain pultaceous feces, and one or two small portions moulded; internal surface of the same color as those of small intestines, but less deep; deeper in cæcum than below. Brunner's glands with central points not numerous, nor large. No ulcers. Mucous membrane of transverse and descending colon covered with a little thin mucus; the membrane itself thin. Strips two to three lines in the whole extent.

Liver of good size; a little soft, pale, containing little blood; finely grained. *Gall bladder* contains a little, quite fluid, yellow liquid; its mucous membrane natural. *Pancreas* natural; a little red.

Spleen, rather large, perhaps one quarter more than usual; of good color and consistence.

Kidneys, their proper tunic easily detached, transparent, natural; substance natural as to color and consistence. *Bladder* contains moderate quantity of urine; its internal surface natural, violet red.

By the Editor. — In this case, the diarrhœa and affection of the bowels were very strongly marked at the commencement. The diarrhœa was less after the fourth day, and ceased on the seventh; it however recurred at times through the whole disease. There were precursory symptoms for a few days, but from the formal commencement on the 2d of January, the coldness and sinking of strength were very re-

markable, and this especially in a strong and robust subject. An affection of the nervous, or animal system was obvious in the first week, but in the second week was further marked by subsultus tendinum, and involuntary dejections; though delirium did not occur till the third week. In this week there was also some rigidity in the limbs at evening only; it became more marked on the twenty-first day and afterwards, but ceased before death. This is a symptom which has very rarely occurred in cases which terminated favorably. The rose pimples are first noticed on the twelfth day; on the twenty first they were livid, while other symptoms were also decidedly worse than before. It was not till the twentieth day, that the pulse was above 100; on the twenty-first it was 120, but not so many on some subsequent days. Its frequency was not so great as usual in proportion to the other symptoms. Cough and some affection of the lungs were manifest from the first; and from the twelfth day there were physical signs, which corresponded in most respects with the state of the lungs, as discovered after death. In subjects so reduced as this man was, these signs cannot be ascertained with great precision.

It should be noted that the meteorism, after subsisting some days, began to subside on the third week, and continued to disappear afterwards, though other worse symptoms ensued. The strabismus, which is noted on the twenty-sixth day, disappeared before death. On the twenty-seventh day, there was an abatement of the bad symptoms generally, but those returned the next day, and death followed on the thirty-first day of the formal disease.

In the appearances post-mortem, we may note first the diseased state of the elliptical glands in the small intestines, of which some were ulcerated, and those nearest the valve of the colon showed most disease; next, the corresponding changes

in the mesenteric glands; last, the enlargement, though very slight enlargement, of the spleen. This last is much less than has commonly been remarked by M. Louis. The others are the phenomena, which he represents as always found in those affected with the continued, or typhus fever of Paris.

Besides these were found several affections regarded as secondary by M. Louis; viz. ulcerations in the windpipe and gullet, and inflammation of the lungs. Also, there was emphysema, both vesicular and interlobular, in the lungs in front, especially on the right. The inflammation in the lungs was denoted by the cough and the physical signs, particularly by the sub-crepitous râle. This râle was noticed on the back, and in such a manner as to refer to the lower part of the back, and in the front, on the left. It was in these parts that the inflammation was found. It is from knowing the manner of observing in the reporter, that I say he referred to the lower part, when he spoke of the back in this case. If he had observed the râle in the upper part, he would have noted it specially. The difference between the right and left lungs, as to the degree of inflammation, is not shown by the physical signs, as he noted them. Nor would this have been easy. The ulcers in the windpipe and in the gullet were not shown by symptoms, unless for the former, we refer to the sensation in the lower part of the trachea observed at the first examination, and the occasional reluctance to speak; and for the latter the dysphagia on Jan. 23. The emphysema in the upper lobes, at least in the right lung, corresponds with the great sonorousness on percussion. There was not found the corresponding want of respiratory murmur. This may be attributed to the state of disease in the lower lobes, causing a supplementary or puerile respiration in the parts not inflamed. This emphysema existed no doubt before the acute disease occurred.

CASE XII.

TYPHUS FEVER.

Hospital la Pitié. Ward St. Paul, 9.

Under the care of M. Louis.

March 9, 1833. — C. D, æt. 27, works at forge. Born in Aine; had been in Paris six months before present illness. Father æt. 60, mother 58, both well, have not had asthma, nor palsy; one brother æt. 48, one sister 28, both well; one brother dead, æt. 12, by a fall on the head. He was nursed at the breast of his mother; at ten years of age he was sick in bed for six months, when he had much vomiting and some cough, without diarrhœa; since then never sick, except for three weeks, from a fall upon the neck, eight years ago; not subject to catarrh, and never short-breathed. Since in Paris has been well nourished, and has not committed any excesses. A month after his arrival, diarrhœa for five or six days. Has been ill since 15th February, and has not worked since. Twelve days before that, he had a blow upon his head, from a fall, when he was stunned, had bleeding at nose and headache. On 15th February the headache continued, and he kept bed for a few days, but not the whole time; was without appetite and could not work. On 24th, went home, (twenty-eight leagues); staid ten days and got better; returned here on the 5th; but, on his arrival, though he had not suffered on the road, had headache, with dizziness, and could not work; has had tinnitus aurium ever since the blow; within two days diarrhœa, with pain in bowels, has been added to these symptoms about the head; five dejections last night, ten the night before. No epistaxis since ill. Came to hospital in carriage, could not walk.

Now, face uniformly though not much colored, slightly livid; eyes moderately open; memory good; intellect clear;

tinnitus aurium in night, but not now; dizzy when sitting; sight good when lying down; eyes a little injected; no headache at present; tongue moist, whitish, with coat on lobes; great thirst; deglutition easy; abdomen well formed, slightly painful, with four or five minute pustules having pink areolæ; one larger on forehead, some near axilla and on thighs; pulse 100, rather large; great heat last night; little cough since yesterday; whistling (sifflante) râle on both sides behind, most on the right; hypochondria supple; more uneasiness at left than right hypochondrium.

At evening, great heat, face flushed; p. 96, hard; resp. 20; no headache, nor tinnitus aurium.

(Syrup of gum. Syrup of oxymel. Enema. Venesection in the foot ʒ xv.)

March 10. — Got only four ounces of blood from foot; in evening ten ounces from arm; felt better after bleeding. This morning no headache, no tinnitus aurium in night; no dejection; feeble, and confused in head on rising; tongue less red, moist; p. 104, regular, larger than yesterday; face less livid; mind clear, talks with ease and laughs; abdomen rather less flat; three or four rose pimples on chest and abdomen.

(Oxymel. Venesection ʒ x. Enema. Liquid farinaceous diet.)

March 11. — Blood not buffed at either bleeding; he remains very feeble; more prostrated; face emaciated since entrance; has slept, but with dreams; tongue as yesterday; less thirst; no dejection; abdomen natural in form, but rather fuller in lower half, and more sonorous on percussion; one more rose pimple; no headache, nor pain anywhere; pulse not hard, nor full, nor very feeble; whistling and sonorous râle everywhere in chest; less strong in front than behind; on sitting

for one minute, respiration suspicious, 16 to 18; readily exhausted; does not laugh to-day.

(Seltzer-water.)

Note by Editor. — Under this date, there are some remarks by M. Louis, which must have been made at that time, as they are written after the above, and the notes of the case were evidently taken from day to day. In this and in the other cases, where similar remarks are given from the same source, I have thought it improper to print them, as it would be committing M. Louis without his consent, and, possibly, incorrectly. But I will deviate so far in this instance, as to say, that M. Louis raised the question whether this was a case of typhus fever, or a disease arising from injury of the brain by the blow. He acknowledged some doubt, but decided that it was probably fever; and, in so doing, laid much stress on the rose pimples, and the blowing (sifflante) râle, as symptoms belonging to fever and not to disease of the brain. In what follows, his diagnosis will be confirmed.

Five, P. M. — Great heat; skin dry; respiration as this morning; sighs more frequent; face more deeply colored; more black round the eyes; hearing remains good; râle over chest louder; borborygmi and desire for alvine dejection.

March 12. — Countenance calm and more natural than yesterday; lying on his back; tongue more moist and less red; two dejections; abdomen not so well-formed as yesterday; some new rose pimples; hypchondria supple; no stupor, nor pain anywhere; resp. 14, with occasional sighs; same râle as yesterday, more marked on left in front, and extremely marked on the back. At evening, an aggravation of the symptoms.

March 13. — P. 104, smaller; respiration the same; abdomen larger; no tumor in left hypochondrium; more pimples; his only complaint is of feebleness.

(Seltzer-water. Enema.)

March 14. — Exacerbation last evening not very great; prostration was increased, and his hearing more dull; one dejection since evening; some sleep; mind clear; meteorism of abdomen, especially at epigastrium; more pimples; some questions excite him to laugh.

(Same prescription.)

March 15. — One dejection, and, in night, hemorrhage from bowels, ten to twelve ounces of coagulated blood; lies on right side; greatly prostrated, which he refers to the hemorrhage; face pale and dull; more indifferent than heretofore; tongue moist; no nausea; pimples smaller and paler; no tremor in left hypochondrium; p. 108, rather small and feeble; respiration as before; cough rather frequent.

(Enema of eight ounces of infusion of flaxseed, with a scruple of rhatania.)

March 16 and 17. — There was no return of hemorrhage, no dejection; the abdomen varied, but, on the whole, became more distended; tongue dry on seventeenth; p. from 104 to 120; resp. irregular, sometimes rapid; cough more frequent; râle the same; he asked for soup; mind more clear, but less disposed to talk.

(Gum potion, with syr. of orange peel. Extract of rhatania, eight grains, on sixteenth. Enema. Seltzer-water, on seventeenth.)

March 18. — Countenance better, more natural; had the enema and returned it in bed; tongue moderately moist, whitish at centre, clean at edges; abdomen more meteorized; five or six new pimples on each side; p. 112, rather large,

regular; heat moderate; resp. 26, much less suspirious; cough considerable; on the lower part of back, at the left, sonorous, mingled with a little sub-crepitous, râle; this part sonorous on percussion; feels very feeble, yet rises up quickly and easily; no pain anywhere; no heaviness of head; no tinnitus aurium; sight good.

(Gum potion, with three dr. of syr. of white poppy.)

March 19. — Face more pale, its skin as if pulverulent, sunken and altered in expression, more emaciated; tongue soft and rather moist; involuntary dejections in bed, of which he took no notice; rather more fulness at epigastrium; p. 102; heat moderate; resp. 30, equal, with dilatation of alæ nasi; sub-crepitous râle, low on the right back, sonorous at left.

(Enema of hot water, with eight drops of laudanum, to be taken in two portions. Weak beef tea in small quantities.)

March 20. — Aggravation of symptoms last evening. Now, heat not great; tongue almost clean; lies on his side; some desquamation of cuticle on abdomen and wrists; p. 120, feeble, small; more deaf.

(Same enema, with ten drops of laudanum.)

Five, P. M. — Copious involuntary dejections; abdomen more distended, and very sonorous, except in right iliac fossa; a little flat on percussion, about angle of right scapula; sub-crepitous râle and a little resonance of voice there; resp. 36; p. 108, feeble.

March 21. — Tongue dry, brownish; p. 112; heat not great; dull and dozing, but rises to his seat with ease, and then shows some spirit and good intelligence.

(Lemonade, with one fifth of red wine. Gum potion, with half an ounce of syrup of white poppies and a scruple of extract of cinchona. Blister four inches square on right side.)

March 22. — Dejections frequent ; tongue more moist and more white ; p. 100, regular, rather small ; heat not great ; less sub-crepitous râle, chest sonorous on percussion ; sunken as yesterday, yet laughs and complains of blister ; asked for food this morning.

(Lemonade with wine. Increase extract of cinchona to thirty grains. Blister higher on chest.)

March 23. — Slight aggravation of symptoms last evening. Now, countenance much better, animated ; intellect good, laughs ; deafness increased ; two dejections ; p. 102, larger than common ; respiration better.

(Same prescriptions.)

March 24. —Deafness increased ; heavy and dozing yesterday ; intellect good, repels with a smile the idea of his being dull and sluggish ; tongue moist ; dejections all involuntary ; p. 104, less full ; heat not great ; resp. 28 ; very little sonorous râle, chest sonorous on percussion but little dilated, and respiration not loud.

(Same prescription.)

March 25. — No important change of symptoms noted, except rigidity of lips, and some, doubtful, rigidity of arms. Diarrhœa still urgent.

(Enema, with ten drops of laudanum and a scruple of rhatania. Gum potion with fifteen grains of rhatania.)

March 26. — Countenance more flushed than usual ; p. 96, large, redoubled, equal ; intellect perfect, smiles ; no evident rigidity of limbs ; diarrhœa less ; strong dilatation of alæ nasi ; both sides of back sonorous on percussion ; whistling and sonorous, but not any crepitous râle.

(Same prescription.)

March 27 to 29. — Involuntary dejections frequent ; cough increased somewhat ; chest sonorous behind on percussion, and

much sonorous râle, but not crepitous; no rigidity of limbs; many sudamina on 27th; emaciation.

Died on 30th, four, P. M.

Autopsy. March 31st, nine, A. M. Twenty-nine hours after death.

EXTERNALLY. — Conformation perfect; no lividity on surface; abdomen rather flat; considerable rigidity of limbs; skin over sacrum thin; muscles of good color and firmness.

CHEST. — Cellular membrane about pericardium infiltrated with serous fluid, citron colored; in the pericardium two ounces of the same, not at all turbid; *heart* of moderate size and natural color; auricles contain dark-red, coagulated blood, in moderate quantity; in right ventricle a small coagulum, partly red; left ventricle empty; aorta at origin natural.

Lungs, both free from adhesions; an ounce and a half of clear, citron-colored serous fluid in cavity of each pleura; the lungs touch each other above, not so below.

Left lung, large; vesicles generally small, some few dilated; upper lobe pale, lower lobe of a slightly livid red color; bronchia of upper lobe perfectly natural, and contain no mucus; those of lower lobe also natural, but contain a considerable quantity of white mucus, moderately adhesive, easily removed by water; the lower lobe contains a considerable quantity of blood, but is not properly engorged, nor granulated; it is elastic from presence of air, and natural in tenacity and consistence; at its base, beneath the pleura, a white, cartilaginous mass, size of a pea.

Right lung, same externally, less distended; vesicles generally small, but some at summit, over more than an inch in extent, very large, the size of common bird shot; also several on the border in front as large as the head of a pin; bronchia of upper lobe contain a very little mucus near their

division ; those below contain more, though the mucous surface of all is natural ; posterior and upper part of lower is more easily torn, or of less consistence than other parts, though there is not less air in those portions.

Abdomen. — *Spleen*, five and a half inches in length ; of a brownish red ; torn somewhat easily.

Liver, of good size ; less red and more unequally so than common ; the yellow substance is irregularly scattered through it in spots of different sizes. *Gall-bladder* contains a green, not very viscid bile.

Pancreas, natural.

Right kidney of a good color, friable ; the *left* redder, less friable. *Bladder* healthy.

Stomach small ; half or two thirds common size ; containing half an ounce of a slightly pink, unctuous liquid. Internal surface generally grayish-red and disposed in longitudinal bands ; the folds pretty numerous in the great cul-de-sac, and large curvature ; not mamelonated ; mucous membrane velvet like and rather thin ; strips three to five lines in the great cul-de-sac, six to eight in large curvature and anterior face, twelve to fifteen in small curvature ; sub-mucous texture injected.

Duodenum contains a rather thick mucus in small quantity ; its mucous membrane grayish and a little red, in the first two thirds ; reddish in the last third ; in its whole extent there are a multitude of little granulations, a line to half a line distant from each other, less elevated in the first half than in the last ; in points, where the valvules are not too near, strips of five or six lines, in other points two to three lines ; mucous membrane of natural thickness ; sub-mucous membrane injected.

Small intestines, larger by one quarter than usual ; contain a very moderate quantity of mucus, greenish, of an alliaceous odor ; the internal surface of the first foot of jejunum is red-

dish, from an injestion of the small vessels; below this it is somewhat yellow; mucous membrane of natural thickness in jejunum, strips five to eight lines; in ileum, coats much thinner, strips five lines only, and in the last three feet two to four lines; in the ileum fourteen ulcers; all these ulcers surrounded by an edge more or less elevated; none of the ulcers more than an inch in diameter, most of them less; all situated on the patches of elliptical glands, some of them occupying a part only of the patches, the parts unoccupied being a little thickened only; in all these ulcers the muscular coat is denuded more or less; the bottom of them more or less red, particularly red in those near cæcum; many covered with a cellular tissue, either a little red or pale, apparently thickened either in spots or in the whole, as seen plainly on cutting through the ulcers in a longitudinal direction. Solitary glands developed in last three feet. Most of the *mesenteric glands* altered in some measure; those near the cæcum of the size of a filbert, red in greater or less degree; four or five transformed mostly into a matter, which is pink internally, yellow at edges; one surrounded by a little pus contained in a sort of cyst, on inner surface of which are seen little flakes; glands above smaller, less red, and those near duodenum grayish and firm.

Large intestines, larger than common by one half; whitish and greenish in the first two-thirds, more generally pink in descending colon, the sigmoid flexure resumes the color of first part. In cæcum spots half a line to a line in diameter, a little elevated, some showing a central point, some not, and some having little orifices instead of points; then follow ulcers of one to two lines in diameter, the smallest the most round; at three inches from valve two ulcers, five to six lines in diameter, at their base showing the muscular coat. In colon many ulcers of different sizes; those in ascending and transverse

colon, two to three lines in diameter, round, rare, scattered; near union of transverse and descending colon, to the extent of a foot, ulcers excessively numerous, occupying at least half of surface; the smaller like those above, round; the largest very irregular in form; the *four* principal ones are as follows; the *first* and *second* between two and three inches long, in the longitudinal direction, toothed (dentillé) on edges, three to five lines broad, and in structure like those in small intestines; the *third* very irregular in form, its surface equal to a square inch, mucous membrane entirely destroyed, and at its bottom is only a very thin membrane; behind which are several large vessels and a little fatty tissue; between this tissue and the peritoneum at one point is a little lymphatic gland; the *fourth* a little smaller, but similar to the third. Mucous membrane in intervals between ulcers gives strips of five to six lines, is rather less adherent to sub-mucous tissue than common, thickened where ulcers are near each other; sub-mucous tissue thickened by infiltration in intervals between ulcers.

In *rectum*, ulcers numerous, smaller, pale, round in its upper part, then becoming very rare, until within two and a half inches from anus; here they are larger, and among them four forming a surface of nearly three inches in the circular, and one in the longitudinal direction, separated from each other in this surface by very narrow bridges; the bases of these ulcers are of a lively red and have transverse ridges owing to muscular fibres, which are covered by cellular tissue; the muscular coat in them is a little thickened, but less than in some of the ulcers above. In the rectum are numerous little crypts, with central, black points, not ulcerated. The rectum contains a light yellow, pultaceous mass.

Neck. — *Velum palati* at the left, anteriorly, of a lively red color and thickened, with an ulcer half an inch in length, at

the bottom of which the muscular coat is seen. *Epiglottis* of a livid pink internally; mucous membrane thickened, especially in the right and upper part, where it is destroyed to the extent of a line and a half by three lines; in its centre is a white line in the longitudinal direction, and this is surrounded by a red line, which last is evidently thickened and formed by mucous and sub-mucous membranes. Above arytenoid cartilages mucous membrane a little red and thickened, otherwise *larynx* natural. *Trachea* also natural, except a part, an inch below arytenoid cartilages, which is soft and a little red.

Head.—Very little blood on surface of *dura mater*. *Arachnoid* natural; traces of infiltration under it at back part only. *Pia mater* very slightly injected; cortical substance pale gray; white substance of good consistence, moderately moist, not injected, giving some little drops of blood only on pressure. Very little serous fluid in lateral ventricles, perhaps five drachms; all other parts within the cranium natural.

By the Editor.—The diarrhœa noted in this patient, a month after his arrival in Paris, is an affection very frequent among strangers on first visiting that city, and need not be regarded in connexion with the disease of a later period.

The injury which the patient received in the head, in the first part of February, and the subsequent symptoms, necessarily caused a doubt as to the nature of his disease, at his entrance into the hospital on the 9th of March. We find that on the 11th, M. Louis decided in favor of the opinion that the patient had typhus fever. The subsequent events showed that the decision was correct and that no lasting injury of the head had been incurred. That, however, some of the symptoms, which occurred in February, were occasioned by the injury of the head can scarcely be doubted; and then a

second question, arises, viz; when did the fever commence. This cannot be answered with certainty, but perhaps the most probable period was the 5th of March, the period when the patient returned to Paris.

Fixing on this day as the commencement of fever, we find diarrhœa on the third day of the disease; cough on the fourth; the whistling râle on the fifth; rose pimples on the sixth; the sonorous added to the whistling râle, over the whole chest, but especially at the back, and getting louder in the evening, on the seventh; the same more marked in the left breast than in the right on the eighth; meteorism beginning on the seventh and increasing to the tenth, when it was fully established; and hemorrhage from the bowels, causing great sinking, though not profuse, on the eleventh. The pulse was 96 on the fifth day of the disease, and was not more than 112, except on the thirteenth and sixteenth days. On the fifteenth and sixteenth days, the sub-crepitous râle and resonance of voice in the lower half of right back, with the rational signs, showed some increase of disease in the lower lobe of the right lung; but the subsidence of these signs on the subsequent days, and nearly a week before death, prevent our surprise that only slight evidences of inflammation appeared in this organ after death. The slight rigidity of the arms was an addition to the unfavorable symptoms, but not enough by itself to justify a bad prognosis.

The appearances post mortem, show, first, the disease in the patches of the elliptical glands in the small intestines, as usual most strongly marked in the last portion of the ileum; also the corresponding disease in the mesenteric glands. The spleen was enlarged, but not greatly, and it does not appear that during life, any enlargement of this organ was ascertained.

In the head there were not any evidences of disease, though the previous injury must have led to scrupulous examination of this part.

The ulcer in the palate was not discovered by any symptoms during life.

The disease in the lungs has already been adverted to. The serous effusion in the cavities of the pleura, and in the loose cellular membrane about the pericardium, probably occurred in the last period of life; if not, it may have contributed to the rapid breathing, which was noticed repeatedly.

The extensive, and in some parts great disease, in the large intestine, does not seem to have added to the derangement of the functions of the bowels. At least this was not greater than in cases, where this intestine is comparatively sound; unless the increased diarrhœa in the third week, and the hemorrhage on the eleventh day, may be referred to this source.

It is hardly necessary to direct attention to the increased thickness of the muscular coat of the intestines in those ulcers, in which this coat formed their base.

CASE XIII.

TYPHUS FEVER.

Massachusetts General Hospital.

Under the care of J. Jackson.

Oct. 15, 1833.—S. K. æt. 32, unmarried, eyes, hair and complexion dark; maid-servant; born in Salem. Entered the hospital last evening. Ill since 7th instant, perfectly well before; on that day headache, distress and pain in limbs, anorexy, weakness, obliging her to go to bed. Since then she has had bad taste in mouth; no soreness of throat, nor dyspha-

gia; thirst; anorexy; nausea after taking too much liquid, but not at other times; diarrhœa from the first, four or five dejections a day; urine not observed; catamenia on 10th, lasting one day, (they had occurred in order the week preceding;) no chills; occasional heat and sometimes sweat at night; no cough, nor dyspnœa, or very little of these; no pain in chest, nor palpitation; headache and dizziness; tinnitus aurium and deafness; no epistaxis; no sleep; some delirium. On the 10th she had the following: ℞. hydr. subm. pulv. jalap. aa gr. viij—misce. After this some castor oil; and, the dejections continuing too frequent, she had fifteen drops of tinct. of opium. After this she had not any important medicine.

The above details were partly from the physician who had attended her.

Now, Oct. 15th, morning; — countenance, as well as mind, very stupid; memory treacherous; cannot tell how long she has been ill, though clear and positive as to existence, or non-existence of certain symptoms; features still, eyes fixed, looking melancholy; face pale or sallow, and evidently emaciated; since her entrance (five P. M. yesterday) no vomiting; great thirst, of which only she has complained; two dejections, very watery, not dark, nor painful, quite offensive to smell, one of them a pint; through the night restless and watchful, and probably delirious, though silent, for she arose from bed and went to table for drink in absence of watcher, though she has seemed too feeble to rise up. Lips slightly dry; tongue dry, enlarged, protruded partially, a thin, brown coat over part of lobes; some soreness of gums, which have a white coat and give out a mercurial fetor; abdomen not swollen, nor painful, but a little tender on pressure at epigastrium; some small rose pimples on abdomen, but no sudamina; spleen not felt; skin hot and dry; pulse varies from 112 to 120, small, not soft;

resp. 21, not difficult; no dilatation of alæ nasi, but slight noise in nose; lies on right side.

(℞. pulv. ipecac. gr. x. Let this be given in an infusion of mint, and the same repeated till she has taken four doses, unless she vomits, at intervals of twenty minutes.)

Oct. 16. — The medicine occasioned nausea but no vomiting; then followed five large dejections, the three last involuntary; these were chiefly liquid, all dark and offensive, but the last was the least offensive; during the day stupor was less than yesterday morning; flushed and hot at times; no delirium in night; some quiet sleep after second dejection; otherwise night not good. Now, on back; eyes fixed, not suffused; great stillness of features; tongue scarcely protruded, tip only seen, and that brown and dry; no mercurial fetor; abdomen as yesterday; deafness quite as great; does not answer so well; there seems to be rather an abstraction of mind than stupor. Last evening she was lying carelessly uncovered, with neglect of modesty.

Oct. 17. — Very restless yesterday, especially afternoon; at 5, P. M., p. 132, face more flushed, very hot; three dejections, the last at nine, P. M., all watery, dark, copious, extremely offensive and involuntary; delirious all night, without sleep; not very thirsty; no vomiting; no sweat. Has continued very restless this morning, but says she has slept a little. Now is on her left side, half out of bed; mouth very sore, sordes on lips and teeth, gums covered by an opake, yellowish-white exudation; abdomen not large, but hard from contraction of muscles; she does not reply when asked if pressure is painful, yet makes a sound as if it were so; some small rose pimples on abdomen; no sudamina anywhere; p. 108; skin not very hot; face more red, eyes sunken; very deaf, and answers very slow; says head feels well and no pain anywhere; arms rigid,

so that they yield with difficulty to the attempt to extend them. Shortly after the above report she was seen lying on her right side.

Oct. 18. — Last evening p. 108. She has continued very restless, especially in night; moaning much, but not talking till this morning, when she has appeared anxious and has been inquiring about her sickness. Three dejections, involuntary, not very large, but otherwise of the same character as before; the last at five, A. M. Cannot protrude tongue; mouth and abdomen as yesterday; p. 96, small; cheeks a little flushed, more fallen in; some rigidity of arms, but this not constant; when extended they return to flexed position, as if elastic; at some times the arm will remain in the position in which it is placed, though against gravity, as in catalepsy.

Oct. 19. — Last evening p. 120. Day and night have been much more tranquil, with frequent quiet naps of half an hour; three dejections, watery, not so dark, two of them very copious, only the first involuntary. She reports better; aspect more comfortable; lips stiff, swollen, especially upper lip; teeth dark; mouth has more offensive odour; abdomen not enlarged; p. 130, small and weak; skin very dry; no subsultus now, nor at any time.

(Mucilaginous wash for mouth. A little wine and water, if grateful to her.)

Oct. 20. — Has slept much, but with groaning, and awoke fatigued; two dejections, since midnight, watery, not large, not involuntary; wine is not grateful. Pulse 144, small, weak; temperature natural; resp. 44, feeble, slightly labored; abdomen the same; scarcely answers, though she understands; says not any better; the fore-arms can be extended at some moments, at others they resist extension; at times the fore-arm rises up, flexed, the biceps being felt rigid, and then it resists

extension very strongly ; deafness great ; asks no questions and makes no remarks.

Oct. 21. — Last evening p. 160 to 180, very feeble ; resp. 52 ; heat moderate ; prostration great ; said she had pain all over her. One dejection yesterday, two in night, the last the most copious, dark and least liquid, all voluntary ; exacerbation of heat from twelve to two yesterday. Now on right side, respiration rapid, groaning ; face pallid and brows contracted, as if in pain ; she fell into this state on turning to side, five minutes since ; she has had several similar turns of distress, and especially from seven to nine o'clock last evening ; but most of the night has been on her back, more tranquil, and she had some sleep without groans ; has said that in these turns she has distress, or pain in abdomen. Tongue partially protruded, moist, greatly coated ; swallows with extreme difficulty ; has refused wine mostly ; resp. 66 ; deafness less ; speaks with difficulty, but very promptly ; mind clear ; skin generally warm, but face cool ; abdomen neither full, nor tense, nor tender.

(The sulphate of quinine was directed, but she died at noon.)

Autopsy within twenty-four hours after death.

Externally. — Universal paleness ; great rigidity of upper and lower extremities ; no œdema ; moderate quantity of fat ; muscles deep colored, rather dry.

Abdomen. — *Stomach* large in volume ; contains a small quantity of thin, brownish liquid, with some little granular sediment, not unlike fine snuff ; internal aspect generally pale, with numerous longitudinal wrinkles ; numerous depressions in lines running along the small curvature, of which some have an ulcerated, granulated, rough surface, without polish, while others retain the smooth polish of the mucous membrane ; on detaching this membrane over these depressions and holding this up

between the eye and the window we see that the membrane is not completely destroyed in any part, but materially thinner in the depressed parts than elsewhere. These depressions are, perhaps, fifteen to twenty in number, varying in length and breadth from one to three lines. Elsewhere the mucous membrane of ordinary thickness, giving good strips.

Small intestines of ordinary volume; contents very small in quantity; in the first quarter is a yellow paste, just sufficient to smear over the surface; in the next third this is more liquid, and of a greenish-yellow color; then, for about a foot, there is a dark red fluid, approaching the coffee-ground color; below this is a darker, greenish liquid. In the upper half, the internal surface is pale, or, at most, with a slight pink tinge in some parts, and in some assuming the color of the liquid in contact with it; in the last half, it is almost universally of a bright, florid red, greatly injected. In this last half, thirty patches of Peyer's glands are visible; of these, twenty-one are ulcerated, most of them in part, and a few are wholly occupied by the ulcerations. Only two of the first eleven are ulcerated, but all below are so. Those not ulcerated present the following appearances, viz.; both to the eye and the touch they show a slight elevation above the surrounding mucous membrane; in some, a part, and in some, the whole of their surfaces shows a bright, red color, and the parts so colored are more swollen and elevated than the rest; in the pale, white portion are seen numerous black points, like the orifices of glands. The ulcerated patches increase in size progressively from the first to the last, at the end of the ileum, with the exception of a few small ulcers at the very end, around the large ones; the ulcers are round, or nearly so, and have all of them rounded, elevated margins; a few of them have a thickened, muscular tissue for their base; but most of them have at their base a loose, gray-

ish-brown cellular membrane, in the form of a slough, attached at its centre, and loose and floating at its edges; this slough is easily detached and is very friable. On removing this slough, there is seen beneath, in some cases the cellular, in some the muscular coat, extremely red and greatly thickened. The ulcers vary from a third of an inch to an inch and a half in diameter; the parts of the patches not ulcerated are red and swollen. The last and largest ulcer occupies a portion of the valve of the ileum. Enlarged, aborescent vessels are seen leading from the mesentery to the ulcers above-described. None of Brunner's glands are to be seen in the small intestines. In the upper half, the mucous membrane has, for the most part, its ordinary thickness, and gives the usual strips of four to five lines; in the lower half, and, more especially, in the lower third, where the redness and injection are very great, this membrane is in some spots increased, in some diminished in thickness, and does not give a strip of more than two lines anywhere, and, in some places, none, though it can in these be thrown up in a strip by the scalpel.

The mesenteric glands generally enlarged; those corresponding to the upper half of the small intestines, scarcely so large as a small bean, and slightly red; those corresponding to the lower half, as large as a chesnut, generally, that is, some smaller, but many larger; these are in color of a deep, somewhat livid red, externally, and red and gray internally; quite friable, and some toward the lowest part are in groups of four or five, are larger than the rest, and contain pus.

Large intestines of ordinary volume; contain scarcely any fluid, but numerous little shreds of a greenish-brown matter, with a peculiar smell, closely attached to the mucus membrane. This membrane is generally of a pale pink color, but is more deeply red in some spots. Brunner's glands are scarcely

seen, with three or four exceptions, in which they are discovered with difficulty; in these cases they are small and pale, with the central black points. Near the cæcum are some spots, of a quarter to three-quarters of an inch diameter, irregular in form, of a dark brown color; these spots are neither elevated, nor depressed, and the mucous membrane, in which they appear, is not thickened, nor softened, nor ulcerated; the color does not extend to the subjacent membranes. In most parts, the mucus membrane is of its ordinary consistence and thickness; but, in certain patches, where there was most redness, its thickness was somewhat increased, and its consistence diminished, not yielding a strip of more than two to four lines.

Liver of ordinary size, of a reddish-brown color, with a distinct granular aspect on the incised and broken surfaces; does not contain a great quantity of blood; evidently consists of two substances, the light and dark colored, in about equal proportions; of its ordinary consistence. The gall-bladder contains a moderate quantity of quite liquid, dark-greenish fluid; internal aspect normal;

Spleen large, perhaps three times larger than common, six inches by four; rather firm than softened; of its usual color.

Pancreas of a pink-gray color; consistence and structure natural.

Kidneys of ordinary size; external coat easily detached, thin, transparent, and leaving the surface of the organ smooth; cortical substance of a grayish-red; whole structure and consistence natural.

Bladder small; mucous membrane thin and pale; consistence natural.

Uterus normal, except a little fibro-cartilaginous tumor on the fundus, of the size of a large bean; this is hard, homoge-

neous, of a whitish-yellow color; and another similar tumor, the size of a pea, in the substance of the organ.

Ovaries of ordinary size, or rather large; each contains several small cicatrices, where there are slight cavities or depressions, perhaps three lines by one; and one cavity larger, say three lines each way; these have thin yellow parietes; corpora lutea.

Peritoneum pale and white.

Chest. — *Pericardium* free, containing less than an ounce of a yellow, clear liquid. *Heart* not large; contains large coagula of fibrine in right cavities, and one or two very small ones in left, accompanied in both with liquid black blood, most in the right. Parietes, cavities and valves, of their ordinary dimensions, color and structure; the substance rather less consistent, or more easily penetrated than usual. Aorta of natural appearance internally.

Left lung adherent at lower part laterally, and a little posteriorly, also the lobes to each other; all the adhesions by a recently organized false membrane, of a yellow color, thin, opake and very friable. The upper lobe is pale, crepitating, light. The lower lobe of a red, violet, and in some spots almost black color, externally; large; heavy; firm; not crepitating, except in a small portion at its upper part, and in another portion, about an inch square, at its inferior and anterior edge. The bronchia of the upper lobe are pale, white, thin, transparent and polished; the substance of this lobe everywhere white, pale, containing air and scarcely any blood or other liquid. The bronchia of the lower lobe are red and thickened, and have lost their polish; they do not contain much fluid, but, in one or two branches we trace a round, well-formed, firm, false membrane, of an opake, yellowish-white color, into

the more minute bronchia. The substance of this lobe is solid, with the small exceptions above stated as crepitating; in these crepitating portions a frothy fluid escapes on incision; the solid part is red, or gray, granulated, friable, contains no air, and yields very little liquid on incision; at several points a purulent fluid escapes on pressure from the incised surface. In the upper part of this lobe is a portion, less than an inch at the surface and an inch in depth, which is dark-brown throughout the substance, resembling in color the sloughs upon the intestinal ulcers, peculiarly friable, without gangrenous smell, but evidently gangrenous. There is another portion, having the same characters, in the lower part of the lobe, rather larger than a dollar at the surface, and two inches in depth.

Right lung, no adhesions; the middle lobe only covered with a false membrane, violet, firm, and, except a small healthy portion in its lower and anterior extremity, having all the marks of disease found in the lower lobe, on the left side; in it some of the bronchia are lined by a false membrane; at its upper and posterior extremity is a small portion, much granulated, friable, and having, as to color, a mixture of light and very dark red, as though blood had been effused there; but not of the dirty, brown, gangrenous aspect. The upper and lower lobes, except a very small portion of the last, were pale and natural, both the bronchia and the substance, like the left upper lobe.

Neck. — *Pharynx*, *epiglottis*, *larynx* natural.

Head. — *Dura mater* very slightly injected. *Glands of Pacchioni* more numerous and in larger groups than usual. Very slight sub-arachnoid infiltration. Both the *arachnoid* coat and the *pia mater* raised with ease, without detaching the substance. *Cortical* and *medullary* substances rather pale

than injected, of their usual firmness and consistence. Half an ounce of clear serous fluid in each lateral ventricle. Every other part of the encephalon of its usual color and consistence.

By the Editor. — This is a case of a woman of melancholic temperament, who was affected with the usual autumnal continued fever of our climate. It is one of the cases to show that this disease is the same as that, which was the subject of the observations of M. Louis in Paris, and of which he has treated in his work on the typhoid fever. It may be well to add, that this disease was somewhat more prevalent and more severe, than usual in the autumn of 1833, than in common years; though not more than in several other years, in which it has come under my observation. Likewise this patient had been residing in a part of the town ordinarily healthy, but in which there was a larger proportion of severe and fatal cases in 1833, than in any other equal district, so far as came to my knowledge. This case was not second to any in the formidable aspect of its symptoms at an early period, for it was at the beginning of the second week the patient entered the hospital, and already her fate seemed to be nearly decided.

The early prostration, confining a woman of laborious habits to her bed from the first day, and the diarrhœa from the commencement, are circumstances to be noted. The bad countenance, the stupidity, (obviously from disease,) the inability to sleep, or to get rest, the dry tongue partially protruded, and the variable and accelerated pulse, combined with the great prostration, on the morning of the ninth day of the disease, justified an unfavorable prognosis. A gentle emetic was exhibited with the hope of checking the dejections, which were not frequent indeed, but quite profuse. The unfortunate action of the medicine perhaps hastened the progress of the disease.

The bad symptoms were certainly aggravated from day to day, and new ones added. Among these should be observed the rigidity of the arms, on the eleventh day of the disease, which, in one of the foregoing cases, has been mentioned as a symptom almost uniformly fatal. Some amendment occurred, though not in all respects, on the twelfth and thirteenth days. There are few cases so bad, as not to present such a temporary amelioration. The increasing and great rapidity of the pulse accords with my observation, not in all, but in many fatal cases. It seems not to have been so true, or else the pulse has not been so accurately noted, in the cases at la Pitié as here.

In this case the rose pimples were seen on the ninth day; whether they had existed earlier is not known; sudamina were not seen at all; the abdomen did not become meteorized; there were no symptoms of disease in the lungs, unless in the rapid and, at times, slightly labored respiration; death occurred on the fifteenth day, a period earlier than is usual.

In the post mortem appearances, we may first notice the marked affection of Peyer's glands and of the mesenteric glands, and the enlargement of the spleen. These, especially the disease in the elliptical patches, are described very fully. The reporter had it in his mind, no doubt, to furnish to M. Louis the evidence in detail, that our common continued fever was the same as that of Paris, in its anatomical characters, as well as in its symptoms.

Among the anatomical changes, which M. Louis would regard as secondary, we have in this case; 1st. Some marks of disease in the mucous membrane of the stomach. As these were in the small curvature only, and there was very little liquid in the stomach, and as, too, the examination took place very soon after death, no one will suspect them to have been chemical changes only. 2d. The mucous membrane in

the lower half of the small intestines was more or less diseased; a circumstance not uncommon certainly; but which, it should be distinctly noticed, does not always occur; and is therefore to be regarded as a secondary affection. 3d. The mucous membrane of the large intestines was not entirely without marks of disease, though these were trifling in comparison with those in Case No. XII, and in many other instances. How far the profuse discharges from the bowels depended on the extensive disease in Peyer's glands, and how far on the secondary disease in the alimentary canal, it is not easy to decide positively. It is however most probable that the secondary affection was of comparatively late date, while the diarrhœa existed from the beginning of the disease. 4th. The lungs were much diseased on both sides; and it is quite remarkable to find the middle lobe on the right so much diseased, while the other lobes were so healthy as in this case. Inflammation in the thoracic viscera is so common in typhus, and especially in the fatal cases, that some are almost ready to regard it as much of an essential anatomical character, as the lesion of any other part. But this, at least, is to be remarked on this head, that, if some disease in the thorax is found in most fatal cases, there is not any one part, nor any one texture which is uniformly the seat of disease; while in the abdomen it is otherwise, according to the observations of M. Louis, and, so far as I have been able to learn, according to the observations made here for the last two years. It should be added, that the absence of symptoms in this case, indicating important disease in the lungs, may be accounted for, as M. Louis suggests in such cases, by the degree of stupor which was early manifested. Physical signs might, no doubt, have evinced the disease in the lungs on the last days of life; but, in a patient situated as this woman was, one does not feel willing to seek

for these signs. It cannot be done thoroughly without annoying and distressing the patient. 5th. Notwithstanding there were some grave symptoms, which might be referred to the nervous, or animal system, there was so little discovered within the cranium in the slightest degree morbid, that the most violent partisan would hardly contend that there was evidence that the disease had its seat within that cavity.

It is not surprising that he, who has attended *only to the symptoms* of typhus, should suspect that its seat is in the brain; but it is very much so that any one should maintain this opinion, who has attended fairly to the anatomical evidence derived from the victims of the disease.

CASE XIV.

TYPHUS FEVER.

Boston, Oct. 11, 1834. — I was invited by Dr. T. to attend the autopsy of J. P. T., æt. 19.

This young man had had our autumnal, or typhus fever, during two weeks, without much diarrhœa, under the care of Dr. T. who stated the symptoms and course of the disease. In the third week he appeared to have nearly recovered, was up and even abroad for five or six days; though his pulse continued to be frequent during this time. On the third and fourth instant he had a little diarrhœa. On the fifth he was more ill, and kept his bed; but had not any alarming, nor even any grave symptoms till the ninth. On that morning he had appeared bright and comfortable; when at eight o'clock, A. M., on making some motion, he was seized with a sudden and severe pain in the right iliac region, or near the anterior, superior spinous process of the ilium. This was soon followed by pain

over the whole abdomen. Dr. J. saw him at twelve o'clock, when there was great pain and tenderness over the whole abdomen; pain shooting up to the shoulder and down the thigh; no great tension, nor swelling of the abdomen; pulse rapid and sinking; some nausea and vomiting with shrinking of the features. There had not been any chill; the intellect was perfect. Coldness soon followed, and he died at four, A. M., on the 10th.

Autopsy Oct. 11, eleven, A. M. Thirty hours after death.

EXTERNALLY. Limbs very rigid; general surface pale; no infiltration.

ABDOMEN. *Stomach* of ordinary volume; internal surface slightly red in some spots; mucous membrane of natural consistence and thickness.

Small intestines of ordinary volume, containing a light yellow mucus; in the upper three-quarters mucous membrane of natural consistence and thickness; in the lower quarter ten or fifteen large patches of Peyer's glands much swollen, some of them red and ulcerated at surface, others pale, with orifices very open and enlarged; in all not only the mucous but submucous membrane thickened; the last, two inches long and nearly the same broad, enormously thickened. In the same part numerous solitary glands also, greatly enlarged; and the mucous membrane thickened and softened.

Mesenteric glands much enlarged, size of a chesnut-red, soft, friable, not containing pus.

Large intestines, nothing peculiar except a perforation of the vermiform appendix by ulceration. In the extremity of this appendix was found a small, flat, oval gall-stone, and it was half an inch above this that was found the orifice produced by ulceration, about two lines in diameter. The mucous membrane of this appendix was thickened and slightly ulcer-

ated at some other spots, besides that which was perforated. The appendix was found lying up against the cæcum, and covered by a false membrane, by which it adhered to the cæcum.

The *peritoneum* was greatly inflamed. The small and large intestines toward the right iliac region in the pelvis were red externally, and in many spots covered with a false membrane, and adherent; the peritoneum lining the anterior parietes was also of a bright red, and had lost part of its polish. In the cavity one or two pints of turbid, purulent serum, with many flakes of lymph, but no feces.

At first we were embarrassed to find the perforation, though its existence was shown so clearly by the history, and confirmed by the state of the peritoneal cavity. The difficulty was, first, that there were no feces in the abdomen; second, and principally, because pressure on the intestines did not cause any air to escape. The seat of the perforation and the subsequent adhesion of the appendix, closing the orifice, afford a sufficient explanation of both circumstances.

By the Editor. — I have thought it best to print this case, though so deficient in details, on account of its peculiar interest. It is an instance of perforation of the intestines and death in consequence of the peritonitis. That the disease was typhus fever, both my son and myself were fully convinced at the time, not only from the opinion of the very respectable physician, who attended the patient, but likewise from the evidence in detail which he gave us. Some of this evidence is contained in the statement of the case. I have not thought proper to add to what my son had written, though I knew that more was given. The disease was a mild one, and the patient seemed once to be convalescent. It is, however, in mild cases, or at least in those which are not peculiarly severe, that this perforation most frequently occurs.

I have known various instances, in which this accident has proved fatal in fever; but they were more frequent in the autumn of 1833, than usual, or else our attention to the subject led us to notice them more than usual. Besides this case, which I saw after the accident, there were two others in the same season in this city, which I also saw. Of these, one only was examined after death, but the symptoms left not a shadow of doubt as to the other. This other was in a young gentleman, who had been ill for more than thirty days, but not so severely as to be entirely confined to the bed more than a week. He had had some diarrhœa, great meteorism, and rose pimples. After having been more ill for a few days, he was somewhat convalescent on one day, and on the morning of the next, much more decidedly so. About noon, on this day, he was seized instantaneously with a severe pain in the lower part of the abdomen, which soon spread, and was followed in a few hours by soreness to the touch, and by increased distention. His pulse became extremely rapid, great prostration ensued, and he died in about twenty-four hours from the time of this attack.

A fourth case occurred in a lawyer in a neighboring town, the symptoms of whose case were detailed to me and left no doubt of its nature. But I had afterwards the further evidence, from the post mortem examination, given me by an intelligent physician, who witnessed it.

In the case of J. P., however, there is a peculiar interest, derived from the part in which the perforation occurred. In the cases given by M. Louis, and in all others, which I have known, the perforation has been in the small intestines. In this case it was in the vermiform appendix of the cæcum. This is a part which is not probably examined in ordinary cases.

Whether it is common for ulceration to occur in this part is not probably known to any one. In one case of typhus in the last autumn, (1834,) I opened this part and found an ulceration, not deep however.

The two cases XIII. and XIV., are the only ones left by my son of fatal typhus in this country, which I have thought fit for publication. He had brief notes of others, and attended the examination of at least six, I believe more, in the four or five weeks before he was taken sick with the same disease himself in October, 1833. In the course of that season there were fourteen undoubted cases of typhus examined by myself, or my friends, and in every one the phenomena accorded with the descriptions given us by M. Louis.

CASE XV.

PNEUMONITIS AND PLEURITIS.

Hospital la Pitié. Ward St. Paul.

Under the care of M. Louis.

Jan. 26, 1833. — This man, æt. 65, entered the hospital yesterday. He was born in Savoy, and at 14 years of age enlisted in the French army, where he remained till the age of 28. From this time until 52, he was a pedlar, and since has had no regular employment, and has hardly done any work. His parents had no disease that he knew of, were never palsied, nor asthmatic. He had twice gonorrhea while in Italy, never any other venereal disease. He does not remember having had any severe diseases, except three, during his life, viz;

1st. Intermittent fever, while in Italy, at the age of 20, which lasted three months.

2d. Acute disease of the chest, two years since, causing stitch in the left side, cough, and fever; was bled twice, and kept bed fifteen days.

3d. Five years ago had retention of urine, for which he entered the hospital Beaujôu. While there, a catheter was retained in the bladder ninety days, it having been changed only once in fifteen days. At the end of these ninety days he left the hospital, sicker than at entrance; for he says that, beside the retention of urine, there was also a catarrh of the bladder and the urine was thick. During the five last years has never been able to pass urine except by means of a catheter; and for eighteen months past has injected every day tepid water into bladder with relief.

From the beginning of disease of the bladder, his health, which had been previously very good, has been always more or less bad, and he has been incapable of continued labor; the appetite has been sufficiently good, but he thinks he has not eaten more than half of what he used to eat; digestion sufficiently good; but perhaps during one fifth part of the time he has been liable to diarrhœa, with griping; never more than six or seven dejections a day. Emaciation slight until pneumonic disease two years ago; but since that period has been quite marked, and his strength also has much diminished, having been somewhat so before. Previously to these two years, he had been rarely afflicted with colds, and had never had dyspnœa; but since, has always had cough and difficulty of breathing; never hæmoptysis, nor palpitations.

Present disease began three weeks ago. At its beginning he had chills and increase of cough; expectoration white; no pain in chest until about eight days ago, *i. e.* after having been sick a fortnight, when it seized him in the right side. It has increased since, and is felt even when patient does not

cough. The same day, or the day after, he was able to walk six miles out of Paris to Sevres, in three hours. After his arrival at the house of a friend in Sevres, the expectoration became red; pain in side increased, much oppression in breathing. He remained seven days at Sevres, where he employed no remedies, and took nothing save beef-tea and goat's milk. Yesterday, 25th, the seventh or eighth day of augmentation of disease, and twentieth from commencement, the patient returned again on foot to Paris, going at the rate of a mile an hour. Entered la Pitié the same day.

Now, nine, A. M.—Eyes blue; hair gray; constitution sanguine; pretty strong; height five feet and six inches; some veins on left leg varicose; these have been so since age of 27. Tongue villous, whitish, a little dry; thirst; anorexy; vomited a little green, bitter liquid yesterday and day before; no dejection for eight days; pulse 100; cough frequent; respiration labored, 44 after conversation; rather severe pain at right side, three inches above the border of false ribs; expectoration rather copious, an ounce and a half, rusty, (brownish,) semi-transparent, containing very minute bubbles of air, slightly liquid. On percussion in front, sonorous at left, very obscure at right; respiration at right in front everywhere coarse, not exactly bronchial anywhere; slight resonance of voice below right clavicle, none in other parts; behind, at right, crepitous râle in superior third of chest, on full inspiration; and below, throughout same side, sub-crepitous râle, alternating with a sound similar to sound of bass-viol; no bronchial respiration, nor broncophony. At left, respiration pure above, sub-crepitous râle below.

(Syrup of violet flowers, with oxymel. Gum potion. Venesection ad ℥ xv. Aromatic potion with grs. viii of tart. ant. conditionally this evening.)

Four, P. M. — Face red ; lips of slight violet hue ; dilatation of alæ nasi ; slight headache ; no buzzing in ears ; no dizziness now, nor at any previous period of disease ; eyes heavy ; pupils round, equal, natural ; tongue a little moist, pale-red, natural at point and edges, white at centre ; mouth bitter ; great thirst ; likes warm drinks ; no soreness of throat ; deglutition easy ; anorexy ; abdomen supple ; slight meteorism at right, and slightly sensible to pressure there ; no dejection ; urine by catheter two and a half hours ago ; no flatness on percussion ; no tumor felt in hypogastric region ; p. 108, feeble ; skin hot, dry not burning ; resp. 40, with much oppression ; a groan attends each expiration, which last is quite short ; speech concise and broken ; auscultation as this morning, except that I do not hear at all a vesicular expansion at right which is heard at left. Below right clavicle is heard a blowing, which sounds like bronchial respiration, although not heard in expiration ; sound like bass-viol heard both sides, behind, in expiration and inspiration.

Jan. 27. — Venesection yesterday to eighteen ounces ; blood covered by a buff, yellow, tough, and having five lines in thickness. Has not taken tart. ant. Strength more evidently diminished ; emaciation ; cheek bones red ; dilatation of alæ nasi ; tongue moist, brown in centre ; abdomen supple, without pain ; p. 120 ; heat moderate ; resp. quicker, 40, accompanied with a sonorous râle ; expectoration less abundant, some parts of a yellow-ochre color, others of brown ; which form a mass, the greatest part of which is somewhat frothy ; the remainder containing very fine bubbles of air ; viscid, semi-transparent. Right side of chest in front is painful on percussion ; so is the left, but less so. At right, behind, the chest is sufficiently sonorous on percussion in the two lower thirds ; in front it is as yesterday. Respiration throughout right side

is coarse, no where vesicular; sub-crepitous râle and almost gurgling below right clavicle; and lower down is heard a kind of crackling, like the noise produced by the sudden separation of two pieces of moist leather. Behind, at summit, fine crepitous râle; below, it is sub-crepitous, alternating with a vibrating râle. Nothing remarkable at left.

(Aromatic potion, with ant. tart. grs. viii, and syrup of white poppies ʒ i. Sinapisms to chest immediately.)

Five, P. M. — Diminution of strength more marked than yesterday. Pulse as in morning, very feeble. Resp. 42. Pure bronchial respiration immediately below right clavicle; less marked lower down; at this latter place very numerous and fine crepitations after cough, or strong inspiration; resonance of voice in the whole front on same side. Has taken a spoonful of potion, which has caused neither vomiting, nor dejection.

Jan. 28. — Potion all taken; face less flushed; emaciation; tongue dry, brown as before in centre; deglutition a little difficult on account of dyspnœa; voice feebler, speech difficult; no vomiting; two dejections; some expectoration, with large bubbles of air in it, gray color, none opake, nor yellowish. P. 112, not very feeble. Resp. 44. Percussion below right clavicle flatter than yesterday; respiratory sounds the same as before.

(Same prescription, only increasing ant. tart. to grs. xii.)

Five, P. M. — Head raised; lips violet; face sallow; resp. 48, with rattle in throat; p. 120; skin hot; speech as before; half of potion taken without dejection, or vomiting, or nausea; urine, twice.

Death at one, A. M., 29th.

Autopsy at nine, A. M., 30th, twenty hours after death.

Exterior of body. Yellow tint generally over body ; redness where sinapisms were applied to inside of thighs ; — no livid spots ; no stiffness of limbs ; pilous system much developed upon abdomen and upon the thighs ; emaciation, not very marked. Four lines of fat upon chest ; two upon abdomen ; muscles firm, red, natural.

Abdomen. — *Peritoneum*, moist. *Stomach* pale externally, rather large ; on internal surface the veins are strongly marked along the great curvature and upon the anterior and posterior faces under the mucous membrane. In several parts the mucous membrane is injected, so as to present red points, and thus are formed many patches of a reddish-gray color. Along the small curvature are three or four longitudinal depressions, from one to three inches in length by four lines in breadth, filled with very red points. In cutting the mucous membrane at these depressions we find it evidently thinner than in the surrounding parts. The whole surface of the stomach is mamelonated, save a part of the cul-de-sac and the small curvature near the cardia. This appearance is most marked in the great curvature, and in the posterior face, and all the parts thus affected are covered by viscid mucus in great abundance. The mucous membrane gives strips from ten to twelve lines upon the small, seven to eight upon the large, curvature, and upon the anterior face, and very nearly the same length in the great cul-de-sac. This membrane is normal as to its consistence.

Small intestines. Pale, slightly enlarged, and containing a very little mucus only ; pale internally, except in the two or three first feet, in which there is a slight injection of the vessels in the sub-mucous tissue. Thirty-seven glands of Peyer, pale, thin, healthy ; isolated glands are only seen in last six inches, white, without central points ; mucous membrane of usual thickness, — gives strips from five to six lines in first half ; six

to seven afterwards, except in some parts of last third, where they are only from two to three.

Mesenteric glands, small, gray, healthy.

Large intestines, contain considerable quantity of fecal matter; pultaceous at first; hard, moulded to form of intestine afterward; mucous membrane, pale, of usual thickness, gives strips from two to five lines in first half; from ten to twelve below; glands of Brunner few in number.

Liver, large; left lobe covers the spleen; right lobe is red, mingled with yellow externally and internally, as if bile had been effused into its substance; color somewhat like mustard; consistence natural. Left lobe, natural in color.

Spleen, small, slightly friable, usual color.

Kidneys, healthy, membrane covering them can be easily detached, is thin and transparent; at summit of each is a depression, six lines long, four in breadth, half deep; substance underneath healthy.

In the *bladder* is a tumor situated at the left of the median line, very near the orifice of the urethra, so that its right face rests very nearly upon this orifice. This tumor is of an irregular, oval form, in length one inch and a half, in breadth one and a quarter, and in thickness two thirds of an inch. Its faces correspond to the anterior and posterior faces of the bladder. Externally its color is yellow, except at its posterior surface, where it is red. It is attached to the bladder by a pedicle, which is four lines in thickness; and although the substance is continuous with that of the prostate, this latter does not appear in any respect morbid, neither as to volume, nor as to texture. The tumor is covered by the mucous membrane. It is hard, tough, shining on its cut surface, and gives a sound under the scalpel. It is not homogeneous; it is of a yellowish-white above, reddish below, and the substance of the pedicle

is less firm and more vascular than the rest of the tumor. The bladder is larger by one half than it is usually, and its walls have three or four times their accustomed thickness, owing principally to a hypertrophy of the muscular fibres. Its internal surface is generally red, especially near the tumor; and about this last for the space of one and a half inches are seen, on the mucous membrane, a multitude of small points, half a line in diameter, elevated, confluent, or separated, and which can be easily raised by the back of the scalpel, and appear to be false membrane. Mucous membrane is in this part twice as thick as it is elsewhere; it is also less movable upon the subjacent parts.

Chest. — *Pericardium* contains four ounces of a yellow serous fluid, with some few flocculi. The *heart* appears a little enlarged, and upon its anterior face is a white opake patch. The auricles, especially the right, the aorta and pulmonary artery contain large fibrinous clots. Substance of heart firm, color natural and cavities of usual size, with walls of natural thickness. *Left lung* has some slight adhesions at its posterior part, the two lower thirds and part of its base; at its apex and on its anterior edge are many greatly dilated vesicles, six or eight times larger than when in healthy state. The lower lobe contains a moderate quantity of blood, frothy as it runs after an incision. Owing to this blood the lung is heavier than usual; for its substance is not in the least granulated, nor hepatized, nor does it have the appearance of the spleen; although it has a little less firmness of texture than is usual. The bronchia, especially at their divisions, are of a bright red color, but still continue polished; those of the lower lobe contain as mall quantity of yellowish mucus.

Right lung, throughout, is adherent. The adhesions are old, cellular at the superior portion; recent below, where the false

membrane is yellow, easily broken, of an unequal thickness, and infiltrated at its base. The lung is much enlarged, and very heavy. Upon its posterior part are seen the indentations of the ribs ; it is hard and firm everywhere, except at its anterior margin, where, over an extent of two inches, the vesicles are much dilated ; and at its base, over an extent of an inch and a half, it is soft and crepitating. Its color internally is various ; it is yellow, or yellow mingled with red-gray, to the extent of two and a half inches from its apex ; more red below, but there also mixed with yellow. It is everywhere granulated, contains no air, very little liquid, and is easily penetrated by the finger ; in other words, it is hepatized to the third degree at summit, and is between second and third degree below. In some of the *bronchia* of this lung is a concrete, yellow, opake matter, which can be followed into the small ramifications, always preserving their form, but having no evident adhesions to them. It is impossible to decide whether this matter is solid or hollow ; however, on making a transverse section of it there seems to be a slight orifice in it.

Neck. — *Trachea* in lower three quarters is of a vivid red color, but not uniformly ; the mucous membrane preserves its polish, and is not evidently thickened ; the redness is entirely in the mucous membrane, for the sub-mucous is not injected in the least. Upon the posterior part of *Epiglottis*, which is otherwise perfectly well, is a small elevation, one line thick, formed by a small cyst, which contains a substance, half liquid, and clear as if crystalized.

Head. — Very slight effusion under *arachnoid*, and only in the convolutions ; *pia mater* slightly injected, easily raised from surface of brain ; cerebral veins slightly distended with blood. *Cortical substance* is perhaps of a little deeper color than is usual ; *medullary substance* somewhat pointed with red,

of good consistence ; two drachms of clear serous fluid in each of the lateral *ventricles*.

Cerebellum, a little marbled; of its usual consistence.

Annular protuberance and *medulla oblongata* are in a normal state.

Remarks by the Reporter. — We have just read an observation, relative to a person, previously ill, who died after eleven days of pneumonia. Let us make a few remarks upon this acute disease, after having brought to mind that it was the second attack of the same kind, within these last two years.

1st. We remark that the inflammation of the pulmonary tissue and pleura was preceded by a bronchitis of fifteen days' duration, and this latter commenced with chills and rather severe general symptoms.

2d. As to the seat of the pneumonia: the physical signs during life, and the appearances after death, prove that the inflammation began in the superior lobe of the right lung. This is an exception to an observation made a long time since, viz.: that pneumonia usually commences in the lower lobe. This affection of the upper lobes has been marked by M. Andral as being oftener fatal, than pneumonia of the lower lobes. M. Louis, in seeking for the cause of this difference of mortality, discovered that inflammation commences in the upper lobe much oftener in old persons, than in those who are in the prime of life; for, of thirty-two cases of pneumonia, which he has examined in reference to this point, he found that in eleven the disease commenced in the upper lobe ; in twenty-one in the lower ; of these the mean age of the former was 61 years ; of the latter 38 years. I have examined also thirty-two cases, reported by Andral in his Clinique Medicale, and, of these, eleven began in the upper and twenty-one in the lower lobes.

Between these two classes, the same distinction in regard to age takes place, only it is not so marked as in the others. In the former, the mean age was 47 years; in the latter, 37 only. The law deduced by Louis from his cases appears confirmed by Andral's, and it is for future time to decide the numbers more exactly.

I will mention, at this time, another question relative to age, in cases of pneumonia, which merits attention; to wit, does the disease go oftener to the third degree in old persons, than in the young and middle aged. I have examined, in reference to this point, twenty cases given by Andral, and of them thirteen arrived at the second degree; and their mean age was 37 years. Seven only had the disease in the third degree, and their mean age was 56. These cases are too few in number to justify any positive inferences; but, in this number, the result is so striking, that it seems to me worthy of our attention. I have thought proper to introduce these remarks because our patient is in precisely the circumstances mentioned.

3d. As to the phenomena which the patient presented during life, without doubt the most remarkable one is the preservation of his strength, during the course of so grave a disease, until within three days of his death. A day at least after the pleurisy had commenced, he went from Paris to Sevres; and five or six days afterwards, unequivocal signs of pneumonia existed; for, at that time, when our first examination of the chest was made, a great portion of the upper lobe was hepatized. However, the patient took the same walk, the day before this examination; though he spent twice as much time on the road as when he went. This circumstance is so extraordinary, and in fact is so different from what we believe generally, that I cannot restrain myself from adding some of the details of another case, analogous in this respect to the foregoing.

On entering la Pitié on the evening of January 16th, I saw a man aged about 35 years, who, after remaining two hours at the hospital, had suddenly died. The nurse, in attendance, informed me that this man had arrived at two, P. M., saying that he had come from the Bureau Central (three quarters of a mile) on foot, and that he had been sick only eight days, never having been sick before. He seated himself near the stove, conversed with the other patients, and finally laid himself down upon his bed. He was observed at this time to have great dyspnœa; his face and hands were of a violet hue and appeared swollen. In a short time after this he died.

On percussion of the dead body, I found complete flatness from one inch below the clavicle, throughout the whole of left breast, front and side, even to the false ribs. On the morrow, at the autopsy, we found the body to be that of a man of strong constitution, the muscles greatly developed, and in the left pleura was a large quart of serous pus. The lung of this side was hepatized and of a gray color throughout, except two inches at the summit; *i. e.*, the lung was yellow and so softened, that in several places there was a solution of continuity, and little cavities were commencing. These cavities were not lined by false membranes, but were covered by the remains of the pulmonary tissue, broken in filaments, which floated in water. It is much to be regretted that we have not this case in greater detail; but one point is well established, that a man having pneumonia, in the third degree, of nearly a whole lung, was able to walk nearly a mile, two hours before his death.

4th. Let us now connect the dyspnœa which our patient had constantly experienced the two last years of his life, with its organic cause, viz. partial emphysema of the two lungs; although the physical signs of this affection were not noticed, so far as we know, during life.

5th. The cancerous affection of the bladder, which appears to date five years back, ought not to be passed over in silence. Let us especially remark, that inflammation of the mucous membrane of the bladder was the consequence, not the cause of this affection; for the patient assured me that on leaving the hospital Beaujôu (where, in consequence of a false diagnosis probably, a catheter had been retained in the bladder 90 days) he was more ill than before; the urine became thicker; and in short he had catarrh of the bladder, which did not exist at his entrance. I am extremely sorry to be unable to answer the questions which could be suggested, in relation to the history of this affection of the bladder, and especially that I cannot say whether there was hemorrhage in the commencement. Whilst the patient lived, in consequence of the treatment he had undergone, I supposed there was a stricture of the urethra; and consequently did not make very minute inquiries upon the subject.

Remarks by Editor.— I add only two observations to those of the reporter.

1st. The *bruit de frottement*, or the sound which resembles that from the sudden separation of two pieces of wet leather, observed on the 27th on the lower part of the right back, is found at the autopsy to correspond with recent adhesions, without liquid effusion, in the lower part of the right lung.

2d. The preservation of the muscular strength to a late period of the disease was certainly uncommon, as has been stated; but it may be well to note that the muscular strength, and likewise the integrity of the mind, is much oftener maintained to the last moments of life, in diseases of the thorax, both acute and chronic, than in those of the abdomen. It is not rare to find patients, under pneumonitis and under phthisis, rising in bed

and even getting up out of bed, in the full possession of their minds, within the last hour of life. It is in such cases that we often hear those calm and interesting discourses, upon their own situation and in regard to the affairs of their friends, from patients, who are fully aware how few are the minutes which remain for them in this world.

CASE XVI.

PNEUMONITIS AND PLEURITIS.

Hospital La Pitié. Ward St. Charles, 11.

Under the care of M. Louis.

May 11, 1833.— K. L., seamstress, aged 50; eyes deep blue; chesnut hair; unmarried; has never had children; entered hospital this afternoon. She was born at Paris; her father died at 40, of pneumonic disease; (ill eight days only;) mother died æt. 38, ill fifteen days, disease unknown; neither of them had had either asthma or palsy, but her maternal grandmother had the latter disease; one brother living aged 49. She was nursed by her mother. In her infancy she never had short breath; until the age of 12 was much subject to epistaxis; has never been peculiarly liable to take cold, and her colds have been of unusually short duration. Menses at 11 for the first time, and the discharge has always been regular; not preceded nor accompanied by pain in head, loins or abdomen; never diarrhœa at these periods; until the age of 30 they usually were abundant and continued six days, and after that time they diminished to the age of 46, when they ceased entirely. Never hemorrhage from uterus, nor leucorrhea at any time, except a short period after the cessation of the menses. Until age of 48, she was never sick with any grave disease, except variola at 6 years, and *fevers*, as she says, at ten.

During the five or six years preceding November, 1831, she was subject to pain in the pit of stomach occasionally after meals; but generally the digestion has been sufficiently good; and she never had dysphagia, nor anorexia, nor vomiting, nor emaciation, nor short breath until November, 1831. At this time she was seized with a most severe pain at the epigastrium; which was followed by vomiting; neither of these symptoms have again recurred, but she has always been ill, since. During the first three months appetite was lost, and has never been so strong since, as it was before the attack; digestion has been difficult. Often eructation of wind and of food after eating; constipation rather than diarrhœa; never dysphagia; pains limited to the loins, limbs, hypochondrium, and right scapula; and these have not been constant. During all this time, she has been gradually becoming thin; she has however continued to work, and this even two nights in the week, as well as in the day. She has never had yellowness of skin, nor cough, nor oppression, nor hemoptysis, nor palpitations of the heart, during these eighteen months; but she has suffered much from pain in the head, and within eight or ten months past her legs have been a little swollen, although this was never the case with the thighs, nor the feet.

The disease, for which she enters the hospital, commenced the seventh of this month; she went to bed on the night of the sixth as well as usual and arose on the morning of the seventh, wearied and fatigued, without as yet, any local symptom. She labored during the day, ate less than usual, and at seven, P. M., went to bed with pain in head and heart. The next morning she had pain in right side of the chest, oppression at breast, cough, white expectoration; slight soreness of throat without dysphagia, and which soon ceased; anorexy, thirst, and heat, without previous chills. Besides these symptoms, she began

to become yellow, and this yellowness with the above-mentioned symptoms have continued to increase until this time. She has always kept bed since the 7th, adhering to a strict diet, and having undergone no treatment except eight leeches to right side of chest. She has not had vomiting, nor diarrhœa; two or three dejections only, natural, since the 7th; no chill, nor sweat; urine was involuntary during the two first days of the disease, and has been very high colored these two last; no palpitations, nor epistaxis since commencement of attack.

Now, four, P. M., 11th.—Lying with head and shoulders elevated; face and conjunctivæ and skin, generally, quite yellow; expression of anxiety; cheeks of a violet red; dilatation of alæ nasi at each inspiration; face showing emaciation; intelligence and memory good. Tongue not thick, a little moist, covered with a white coat; bad taste; no pain in throat; deglutition easy; thirst; anorexy; no dejection to-day, one yesterday; abdomen well formed and not painful, soft except in right hypochondrium, toward epigastrium, where is felt a resistance over the space of three inches below ribs; and she is sensible to pressure on this spot. Cough rather infrequent; expectoration nearly nothing since entrance; pain in right side from mamma to border of cartilages of ribs, and extending behind; it is excited by motion, cough, or full inspiration; very great dyspnœa; speech difficult; resp. 28, high; decubiture dorsal; lies easier on right side than left; chest rounded and very prominent in front. Percussion more sonorous, and respiration stronger at left than at right below clavicles, although it is pure in front on both sides. Behind, percussion sonorous and respiration natural, without expiration, at left; at right, percussion very obscure, nearly flat over the two lower thirds, where is heard a bronchial respiration, very marked in both expiration and inspiration, and mixed, especially below, with a crepitation rather

fine. In same parts a strongly marked bronchophony, partaking of the character of ægophony. The bronchial respiration, the crepitous râle and the bronchophony extend to the right side, but not in front. In the upper third of the back respiration pretty good. Pulse 96, regular, vibrating, but neither hard, nor very large; skin hot, but not very dry; complains of headache.

May 12. — Little sleep in night; no sweat; one dejection, fecal matter, yellow; yellowness and pulmonic symptoms continue to increase; bronchial respiration very decided; crepitation gone; pain in right side a little more since yesterday; three sputa, yellowish; the others are white, but all are viscid, semi-transparent, and contain very fine bubbles of air; objects do not appear yellow to patient.

(Venesection to ʒ xii. Gum potion. Strict diet.)

Three, P. M. — Half of blood drawn is serum. Clot is less firm than usual, but it is covered at top with a buff which is yellow like the skin of patient, and has two lines of thickness at edge, less than one in centre and is very tough; very little relief since venesection; auscultation as this morning, only now is heard an expiration at right in front; none at left; p. 96; resp. 20.

May 13. —Bad night; resp. 32, more anxiety but less pain; cough more frequent; feebleness more marked; skin more yellow and more hot; p. 96. Nothing new from auscultation, except that the bronchophony behind has something more ægophonic in it than before; tenesmus; no dejection; thirst greater.

(Syrup of violet flowers with gum syrup. Aromatic potion with grs. vi of ant. tart. and ʒ i of syrup white poppies. Enema of flaxseed tea.)

Four, P. M. — As this morning. Pain almost gone; no nausea, nor vomiting, nor colics; two yellow dejections, solid;

many greenish-yellow sputa; others white, &c., as before; same on auscultation behind; throughout lower half right side, in front, the intercostal spaces are very slightly marked, and the part seems prominent. Percussion here very sonorous, and respiration feeble; same at left, low down, but less marked.

May 14. — Has taken all the potion; ten dejections; no vomiting; feels worse; pain in side again; more yellow and feeble; expectoration as yesterday P. M.; no soreness of throat, no nausea.

(Ant. tart. grs. viii.)

Five, P. M. — More oppression and anxiety; resp. 36; speech very difficult; three or four dejections, without nausea, or vomiting; pain as yesterday; sputa more liquid and less yellow, without green tinge; expiration more prolonged below right clavicle than before; p. 100.

May 15. — Has been constantly having dejections during night; on percussion more flat below right clavicle, and respiration coarse, where I found prolonged expiration yesterday evening; more yellow.

(Tartarized antimony omitted. Blister to thighs.)

Death at two, P. M. without agony, or convulsions.

Autopsy ten, A. M. 17th, forty-four hours after death.

EXTERIOR. — Whole surface of skin yellow, without any livid spots; stiffness of body; fat four lines thick upon chest; muscles of a good color and consistence; no infiltration of lower limbs.

ABDOMEN. — *Peritoneum* moist, healthy. *Pharynx* and *œsophagus* covered throughout with healthy epithelium.

Stomach covered almost entirely by liver, which descends towards the epigastric region. It is of moderate size and contains a moderate quantity of a grayish liquid, which flows easily; on its interior, it is nearly throughout gray, or white,

slightly red toward cul-de-sac and in small curvature ; the two faces and great curvature are mamelonated, especially toward pylorus, but no where in a great degree. Mucous membrane has its usual thickness everywhere, and gives strips from four to five lines in cul-de-sac, where there is redness, owing to injection of the membrane ; from eight to ten upon great curvature and the two faces, and a little longer upon small curvature.

Small intestines. — Usual size, thin, contain a small quantity of a clear, yellow liquid, which flows freely, mingled with some mucosities. Mucous membrane pale, white through whole extent, except toward end of ileum, where it is a little red. It is thin everywhere, and has its usual appearance ; yet, although not apparently softened, I cannot raise strips of more than two lines in any part. In three last feet, the glands of Brunner are a little more numerous and developed than usual. At two feet from end of ileum is a diverticulum three inches long, and sufficiently large to admit the middle finger ; its structure is precisely that of the intestine. *Mesenteric glands*, small, healthy.

Large intestines. — Moderate size, contain clear, thin, yellow fluid, with parcels of fecal matter, not moulded ; mucous membrane pale, thin, white ; give everywhere strips from twelve to fifteen lines. Brunner's glands distinctly seen, but not larger than usual.

Liver. — Partly covers the stomach, extending as it does, more than usual into epigastric region; in other parts it is of its usual size, but in this part it is covered both anteriorly and posteriorly by false membrane, which is not in a continuous sheet, but presents the appearance of many little elevations, which can be detached in strips. Underneath this membrane, especially towards the edge, are seen small irregular spots of

a brownish-yellow hue, which color enters the substance of the organ ; and in this part the liver is much firmer than elsewhere, and it is only with much difficulty that the finger can be made to penetrate it. These yellow spots are not more granulated than other parts of the organ, and in other parts there is the usual consistence and color. *Gall-bladder* of usual size, contains a yellow fluid, rather clear and thin. Its duct appears not very much dilated, while the ductus communis choledochus is so very much enlarged, as nearly to admit the entrance of the little finger. This dilatation extends to duodenum, into which can be passed a stilet of two lines diameter. The dilatation seems to be owing to a biliary calculus, which is situated in the duct itself, and which has nearly twice the volume of a pea ; is round and broken. In the liver the hepatic ducts have first three lines, then two, and one line in diameter, and in no part is there found any other calculus.

Spleen, in color, size and consistence, as usual ; it contains much blood, but is not very friable.

Kidneys, of a deep red, except tubular portion, which is a little pale. Cortical substance red, mixed with yellow ; of usual firmness. External membrane easily detached, without tearing the substance of organ ; it is thin, and semi-transparent. *Bladder* rather distended with urine ; its mucous membrane pale, thin, and gives strips more than an inch long.

Uterus small, natural. Mucous membrane healthy ; and has nothing remarkable about it, save a folding upon itself toward the upper angle at right side. This folding is red, half an inch long, and hangs freely in cavity of the organ.

Chest. — *Larynx* and *trachea* are pale, white, healthy ; strips from fifteen to twenty lines long from trachea. The lungs touch in front under sternum.

Right lung, adherent to diaphragm by means of a false membrane, which is yellow and friable. In cavity of pleura are eight to ten ounces of a yellow, serous fluid. The superior lobe has no false membranes covering it; the middle is partly covered, especially towards its base, where it adheres to the inferior, by a false membrane, as above described, yellow, tearing easily, one third line thick; and the lower lobe is entirely covered by it. This lung is very heavy, owing to the weight of the lower lobe, which is very large and firm, and does not crepitate in any part. This lower lobe has, nearly throughout, passed to the third stage of inflammation, *i. e.* it is yellow, mingled with a little red in spots, is granulated, very friable, suffers the fingers to penetrate it easily; contains no air, but allows much purulent fluid to escape on slight pressure. Towards its base it is red for a small space, granulated, but less softened; in some spots the color is of a brownish-yellow, but they have no gangrenous odour. A part of the two upper lobes, especially toward their posterior portion, is red, granulated, slightly friable, hepatized. Throughout they contain a rather large quantity of yellowish-red and frothy liquid. Many vesicles in this lung towards anterior edge, and base of middle lobe, are, perhaps, two or three times larger than usual. The bronchia are everywhere pale, smooth, not thickened, nor dilated. The only difference between those of the lower lobe and those of the two upper, is, that in the former is found a thin, yellowish, opake liquid; but nowhere is there any false membrane.

Left lung is much smaller, and less heavy, than the right. The upper lobe has many dilated vesicles, towards its anterior edge, but fewer than at right. This lobe has very little liquid in it, and everywhere it crepitates, and the liquid, which flows from its cut surface, has not the same yellow color, as that of

the right upper lobe. The inferior lobe is partly granulated, solid, red and friable, but the greater portion contains air; the bronchia of both lobes are pale, thin, smooth, healthy.

Pericardium contains two or three ounces of a yellow, clear, serous fluid. The *heart* contains fibrinous clots; its consistence, volume, and color, are natural; valves free and healthy. Ascending vena cava, as also the iliacs are smooth, thin, and have in them a little clotted blood.

Head. — Slight effusion under arachnoid; longitudinal sinus contains a small clot, fibrous and very thin; glands of Pacchioni small; pia mater somewhat injected, easily raised. Cortical substance of ordinary gray color; medullary substance white, slightly injected, presenting a faint lilac tinge, soon after being cut. Consistence good everywhere. Lateral ventricles contain little serum, perhaps an ounce each. Central parts, corpus callosum, corpora striata, medulla oblongata, annular protuberance, cerebellum, all have their usual color and firmness. Pituitary gland very soft, of reddish-yellow color, partly liquid, partly pulpy in interior, firmer towards its periphery, as if it were enveloped in a membrane.

Reflections by the Reporter. — We have just read the case of a woman sick during eighteen months, previous to entering hospital, and who died of a very severe pneumonia, which ran through all its periods, even to suppuration, and that throughout a large portion of the lung, in the space of eight days. The only remark we shall make in relation to the pneumonia is this; our patient had febrile symptoms during twenty-four hours previous to any evident local affection.

We may consider the pneumonia as an accident which has enabled us to see a chronic lesion of the liver, which had made but little progress, and which had given rise to few symp-

toms. The patient had been ill eighteen months; during this time progressive, through very great emaciation; diminution of strength and appetite; pain, at intervals, in right hypochondrium, below right scapula, and in the limbs; and, at the last, yellowness in the skin and eyes; no other symptoms relative to the digestive organs, lungs or heart. After her entrance into the hospital we were able to add yet another circumstance, viz. a fulness and sensibility to pressure in the right hypochondrium towards epigastrium. These were all the symptoms we were able to obtain, in reference to this chronic affection, which had caused emaciation, and diminution of strength during eighteen months.

At the autopsy we found the lesion of the liver above described, and no other that could be called a chronic affection, and consequently would explain the symptoms. But what is the nature of this lesion? what name shall we give to it? where shall we put it in a pathological table? For myself I know not how to answer either of these questions. It had somewhat the appearance of what Laennec has described under the name of cirrhose, *i. e.* there were yellow granulations, which this author gives as characteristic of this lesion. But this observer does not tell us whether the organ is softened, or hardened in this disease. For want of this information we are embarrassed as to our decision in the case before us; for one of the circumstances, the most marked, was a hardening of the tissue of the liver of our patient in the parts evidently diseased. Finally, in the actual state of our knowledge, all we can do, is to state the symptoms, and describe the lesion, and leave its nature and its relations to be decided hereafter.

But we have passed in silence another affection of the biliary apparatus, which will be thought of as much importance as that of which we have just spoken; I refer to the biliary

calculus found in the ductus choledochus. This calculus appears to have been the cause of the yellowness, which existed during eight or nine days before the death of our patient; but the passage was not entirely obstructed. The bile passed always into the intestine, for the dejections were always yellow during life, and bile was found in the intestine after death. It may be asked how long this calculus had been in the duct and what relation it bore to the disease of the left extremity of the great lobe of the liver, as cause or effect. I do not see how we can answer these questions rigorously. We will only remark that the enormous dilatation of the passage is by no means a proof that the stone had been there a long while; for we see this dilatation of membranous organs, take place in a very short time.

We will not cite the hollow organs, which are formed for dilatation and contraction every day; we will mention the ureters only, together with the pelves of the kidneys, which dilate in the space of one or two days, to a much greater extent, than the biliary passage, in the present case. An unnatural anomaly demands yet another moment of our time, I mean the *diverticulum*, three inches in length, which was attached to the ilium, and which, terminating in a cul-de-sac, floated freely in the peritoneal cavity, like the vermiform appendix of the cæcum; but having, however, eight times the diameter of this appendix. This anomaly is worthy of remark, inasmuch as it sometimes occasions an internal hernia; for by the adhesion of its free extremity to a fold of the intestine, or to the walls of the abdomen, it may form a band, capable of producing strangulation of the intestine. Cases of this kind, presenting all the appearances of hernia, without any external tumor, may become very embarrassing as to the diagnosis. There are many such cases in the annals of science. I have

seen one in a young man aged eighteen, whose intestine had the same anomaly, as we have described in this case ; and, in consequence of his having all the signs of strangulation of the intestine, he was suspected to have internal hernia, though its cause was unknown till after death.

By the Editor. — To the remarks above, we may add, 1st. In addition to the signs, rational and physical, of pneumonitis, it is noted on the 11th and 13th, that the bronchophony of the right back partakes of the character of ægophony. On the autopsy we find effusion upon the pleura in this part, over the hepatized lung, showing the accuracy of this sign.

2d. On the 13th, we find noted that, in the lower half of the right breast, the intercostal spaces are somewhat filled out or prominent, and in the same part, the respiration is feeble, while the percussion gives a full sound. The same signs were noticed on the left, in front, but in a less degree. These signs belong to vesicular emphysema, and this is found in the corresponding parts of the lungs after death. As some one, a stranger to the reporter, may suspect that his imagination aided him in describing these exact coincidences, it may be proper to state, that I have before me the original rough notes of the observations made before the death of the patient; and that I have also a copy of the case in French, drawn up by the reporter, and read by him to the society of medical observation in Paris. As most of the members of this society must have seen the case, as well as himself, he could not have ventured to give any colored view of it in their presence.

3d. The hepatization of the left lung was not discovered during life. It might have been, with more care. Perhaps it took place in the last day or two ; it may be said, however,

that we are apt to overlook the slighter affections in cases, in which we have discovered one grave disease, and this often leads to errors of no small importance.

CASE XVII.

PNEUMONITIS.

Hospital la Pitié. Ward St. Paul, 9.

Under the care of M. Louis.

Jan. 10, 1833. — This man entered on 13th ult.; complained then of pain in side, which had lasted three or four days; but he never appeared very ill, and his breathing was good. From the time of entrance until the present, I have often examined the left thorax, and have found flatness on percussion, absence of respiratory sound, no bronchial respiration, nor bronchophony. Yesterday morning, a short time after visit, he had chill, and at same time, pain in nose, which on feeling it appeared to him swollen; his thirst increased, no appetite; no nausea, nor pain in belly; two dejections, no diarrhœa. No pain in neck yesterday, nor before; sleep pretty good. Now, (twenty-three hours after attack,) face not recognizable; nose large, tender, red from tip to an inch above root on forehead, one inch on right side, and one and a half at left; both eyelids affected, the left the most; lips natural; p. 112, feeble, small, regular; heat slight; tongue dry, its color natural, easily protruded; no pain in abdomen; respiration seems easy; voice rough, hoarse; says throat feels dry; no sweat in night, chest flat behind at left, auscultation as before.

(Gr. i. ant. tart. in sweetened whey.)

Four, P. M. — p. 108, skin hot, cutaneous affection extended three or four lines in every direction, except toward lips. Respiration, as he lies asleep, is 27.

Jan. 11. — Disease extended to hair on forehead, and to a line with external edge of eyes, on cheeks; epidermis raised on right cheek; crusty eruption along both sides of nose; p. 92, not large; two dejections. Antimony not taken.

(Sweetened barley-water with gr. ii. of ant. tart.)

Four and half, P. M. — p. 120, small; skin hot, dry; resp. 36; high on left back, respiration bronchial on expiration; in front, both sides puerile; thirst; deglutition easy; slight pain under jaws, from swelling of glands; no headache.

Jan. 12. — Disease has not extended; skin of face and forehead less tense, nose smaller; little vesication on right cheek, and desquamation on forehead. Pulse as yesterday evening. Tongue reddish, not coated; four or five dejections; intelligence good; glands a little swollen.

(Half a pint of flaxseed tea for enema. Three cups of beef tea.)

Three, P. M. — p. 116, heat; respiration bronchial left back; about centre and lower third there is resonance of voice. Little scales beginning to appear over whole of diseased parts.

Jan. 13. — Tension and swelling much diminished; crusts and desquamation increased; slight œdema toward right angle of jaw without redness or pain; some towards occiput, other symptoms as before.

(Syrup of violet-flowers. Flaxseed enema. Three cups of beef tea.)

From this time until five, P. M., 19th, slight records are made, and referring principally to disease of skin.

Jan. 15th, left ear swollen, red, tense; right, not so. — 16th, left ear less swollen, and right, attacked now as left was yesterday. On 17th, and 18th, right ear less swollen. 18th, left nearly natural. On 19th, all redness and tension gone from head. Œdema of scalp is mentioned on the 18th, and had existed previously.

The pulse gradually diminished until 18th, when it was at 96; the skin became less hot, resp. 30, on 18th; the tongue was slightly moist on 14th, yellow on 16th; 19th, A. M., it was dry and red. Two dejections reported on 18th and 19th. On 14th, patient said he had no cough. By auscultation on 18th, A. M., sub-crepitous râle low down on left back. On 19th, A. M., crepitous râle at middle of right back; and bronchial respiration below. Treatment was until 18th, sweetened rice water with eight ounces of flaxseed tea for enema daily, sometimes mixed with decoction of poppy heads. On 15th, patient was allowed three and a half cups beef tea; 16th, a small quantity of vermicelli; on 18th, gum potion with oxymel, was ordered, and three cups beef tea; 19th, plaster of Burgundy pitch to right side of chest.

Jan. 19, P. M.—p. 132; resp. 44; says he has had much more cough for two days past; without chills, or increased dyspnœa, or pain in chest; no expectoration; now, no pain in throat, deglutition easy; no pain in abdomen; has appetite; no diarrhœa; dejection daily. Tongue, rather dry, furrowed, brownish; voice muffled (voilée), no headache; countenance much emaciated; — auscultation in front, good; murmur stronger at left than right; percussion there good; behind, on the right bronchial, respiration and bronchophony at middle; crepitous râle as before, below; and flatness on percussion.

Jan. 20. — Little sleep; no sweat; tongue moist, otherwise as yesterday; on percussion does not resound well at lower half of back on either side.

(Aromatic potion with gr. vi tart. ant.)

Three, P. M. — p. 160, very small, varying; resp. 52, with rattle in throat; features pinched; eyes natural; no headache; voice very feeble; skin very hot; tongue dry, mamelonated, brown; not thickened, nor painful; deglutition easy; belly

soft, bears pressure, contracted; no colic, nor vomiting; but five or six liquid dejections since morning. Great emaciation within eight days.

Jan. 21. — Repeat antimony.

Five, P. M. — p. 144; resp. 56. Percussion good in both breasts; in front, at the right, lower part, crepitous râle rather large, disappearing after a short interval; tremor communicated to hand at right, none at left; respiratory murmur very low at left, too weak to allow of examination behind. Cough very frequent without expectoration.

Jan. 22. — Death at one, A. M.

Autopsy, Jan. 23, ten, A. M., thirty-three hours after death.

Externally. — Surface pale, face covered with little scales, (desquamation of the cuticle;) no violet spots, anteriorly nor laterally; no œdema of lower extremities; emaciation considerable; a little more than a line of fat over chest and abdomen; muscles sufficiently firm, not large.

Head. — Dura mater natural; glands of Pacchioni fully developed at posterior part of longitudinal sinus; considerable effusion under arachnoid, which, however, is not very vascular; gray substance of brain paler than usual; white substance, throughout, has very few red points, but of good consistence and firm; very little serosity in ventricles; cerebellum, medulla oblongata healthy.

Neck. — *Velum palati*, and upper part of pharynx have on each side a thin, white opake membrane; this is not continuous, but is at intervals only; does not extend into œsophagus, and is easily removed by the scalpel.

Larynx and *trachea*, natural; the last somewhat red, containing two or three morsels of matter like the contents of stomach, perhaps entered after death.

Chest. — *Pericardium* contains about four ounces of a red-

dish serosity ; white spot, one inch long, half an inch broad, on the surface of heart. A large firm coagulum fills right auricle, extends into ventricle and vena cava ; small clot in left auricle, but blood there less entirely coagulated. (Here the reporter makes a remark, that shows he meant to have examined more minutely this organ, but was prevented from so doing.)

Left lung, adherent by a very thick false membrane, between pleuræ in its upper two-thirds ; and in this membrane are numerous small tubercles ; the lower third of lung is covered also by a false membrane, in which are many small ecchymoses. This false membrane is separated from another on pleura costalis by a quantity of serous fluid. By removing the pleura costalis, the pouch is well demonstrated. The upper lobe contains numerous gray, semi-transparent granulations, some becoming a little opake, none completely so ; these found only within four inches of apex, and with them one cretaceous mass ; tissue around them is natural, crepitating well, is full of air, though more red than the healthier part of lungs. (The bronchia, says the reporter, leading to this lobe were not examined, which was a great oversight.) Lower lobe anteriorly healthy, crepitating, bronchia easily followed ; posteriorly and externally it is compressed, does not crepitate, is red, not granulated, but as if carnified, is hard, not easily penetrated by finger. Bronchia of this lobe traced with difficulty to periphery, are red, thickened, evidently of less diameter than those of the upper lobe same side. This lobe does not contain much fluid, and sinks in water.

Right Lung, — considerably larger than left ; is slightly adherent, by cellular membrane, to sternum and pericardium, elsewhere free ; thick, recent false membrane between lobes.

Upper lobe, — anteriorly crepitates, is pale and is healthy,

save that it contains a few gray semi-transparent granulations; posteriorly, and especially at its lower part, is commencing inflammation, which, below, is passing to hepatization, *i. e.* much red fluid flows from incision in the upper part, but toward the lower part it becomes less in quantity and is less frothy; also the substance is less crepitating, and is more easily penetrable to finger, than in health. Bronchia pale, thin, especially anteriorly; a little redder and not thickened below, and posteriorly; — *lower lobe* heavy, and of a light reddish-gray color, not crepitating, very friable, granulated, sinks in water, *i. e.* between red and gray hepatization. The bronchia of this lobe, beginning at one inch from their origin, were filled to their minutest ramifications with a concrete, tubular (hollow) yellow substance, of very considerable firmness, rather of a fibrinous, than mucous consistence; not evidently adherent to bronchia, but seeming to be a false membrane lining them. It could be traced to the minutest ramifications, without breaking, even to those smaller than a common pin; it became white on arriving at these smaller bronchia. The branches of this membrane were everywhere hollow and firm, retaining their form, even after having been folded on paper. The bronchia underneath were red, evidently thicker than those of upper lobe, and I thought a little less polished.

Abdomen. — *Peritoneum* moist. Organs generally pale.

Stomach, — one half as large again as usual. Internally in three quarters of the organ, nearest cardia, is of dark brown, almost black color; in many parts has bright red points, especially in great cul-de-sac and anterior face; the part nearer pylorus is of a pale white, with some spots of equally vivid red.

The large veins are very strongly marked, under mucous membrane, which last appeared to the reporter, soft in cardiac half, though of its usual thickness. Organ contained a small

quantity of a dirty grayish fluid, with little morsels, like curded milk, and some beans.

Small Intestines. — Little yellow mucus in upper part, more consistent substance near cæcum; membranes generally pale, save in last two or three feet, where are some patches of rather a lively red; strips three lines long here; five above; Peyer's glands natural; mesenteric glands small, grayish, healthy.

Large Intestines. — First half is filled with a pultaceous, yellow matter; cæcum and six inches of colon are red internally; mucous membrane not thickened; but not yielding strips of more than three or four lines; while in some parts of colon, where it is pale, strips are raised twelve to fifteen lines long. Substance of the intestine easily torn.

Liver, rather large; not containing much blood; quite friable.

Gall-bladder contains a quantity of yellow, stringy fluid; its mucous membrane natural. *Spleen*, large, soft.

Kidneys, — Left larger than right, and than usual; lobulated, and has a very small cyst, containing serous fluid, at its upper part, just under external membrane. Internal substance of both, soft and rather pale; right kidney smaller, but has a cyst that is similar to the one above described, though larger.

Bladder, — mucous membrane pale, gives strips of twelve to fifteen lines; muscular portions very distinct, thick, like columnæ carneæ of heart, leaving between them little depressions of two or three lines on posterior face of bladder.

Notes by Reporter. — Since there were tubercles found in the false membrane about the upper lobe of the left lung; they must have been formed since the membrane; perhaps, therefore, those of the lungs are equally recent.

Remarks by Henry I. Bowditch, M. D. — The above case, though very defective, presents many points worthy of our careful attention. During its course we have examples given us, of three distinct diseases, each well marked by its appropriate symptoms. Let us examine each.

1st. During the twenty-nine days, previous to the first notes taken by the reporter, the patient evidently was suffering from pleurisy. For, before entrance he had experienced, during three or four days, a pain in the side, without great dyspnœa, or apparently any grave disease. By means of auscultation, an absence of respiratory murmur, without bronchophony or bronchial respiration was discovered. In addition to this, there was flatness on percussion, on the left part of the back of thorax. Though these details are very imperfect, still, what other disease than pleurisy could, at that time, have existed? No other than pneumonia can be thought of. But pneumonia, to have caused such physical signs, must have been very severe. Pneumonia would not have continued so long and severely, without having caused more general disturbance of the system. Besides, there never was any crepitous râle, and there was perfect flatness on percussion. It is not rare to see a man in Paris hospitals, apparently not very ill, who is able to get up, and walk about, and yet, on examination, all the physical signs of a great effusion into the chest will be found. Pneumonia, it is true, in some very rare cases, does not prevent the patient from rising and walking; still, every one knows that it prostrates more than pleurisy. But the autopsy proved the diagnosis to be correct; for, on the left side is found an effusion into the cavity of the pleura. This was the principal disease, though the lung was altered, probably by compression, by the affection of the bronchia, and the usual changes that take place after death.

2d. The second disease was erysipelas of the face, and it lasted from Jan. 10th to Jan. 19th. It is interesting on account of the precision with which the commencement and termination are marked. But there are two important omissions in the history of the symptoms, viz.; no where is it stated whether the redness of the skin had well-defined limits, or whether the skin was hardened in the part affected. These signs are of very great importance in the diagnosis of erysipelas. The disease began, as it generally does, on the nose, and afterwards spread to both sides of face. On the 10th, it is stated that no pain had been felt just under the lower jaw, either previously or on that day. This remark has reference to an opinion, given out recently by Chomel, that, in very many cases of erysipelas of the face, there is pain under the jaw the day previous to the commencement of the affection of the skin, owing, as he thinks, to some affection of the absorbents. How far this opinion is correct remains still sub judice. By the report, it appears that our patient did suffer on the afternoon of the 11th, from such pains; but in Chomel's cases the pain has been experienced before any evident local symptom, so that the professor has made it, at times, a means of early diagnosis. The present affection lasted nine days; the mean length, according to Louis, being eight.

3d. From the 19th, the day of the termination of erysipelas, until death, our patient suffered from his third disease, viz. pneumonia. It produced hepatization of the right lung. Of the truth of this assertion the autopsy leaves no doubt. Besides, the crepitous râle, and bronchophony, &c., proved it during life. On the 19th, we find it reported that the cough has been worse, and the pulse and respiration are quicker than they were before. These symptoms mark increase of disease,

but I doubt much whether any one unaccustomed to the use of auscultation and percussion, would have discovered the existence of the pneumonia before death. For there was no *expectoration*, and there was nothing, so far as I can see, to prove the existence of pneumonitis, save physical signs. This absence of pneumonitic sputa, even in advanced cases of the disease, is quite singular, though Andral ; in his Clinique Medicale, gives one case in which the expectoration disappeared after the first day, and also two in which there was *none at all.* While considering this point, I cannot refrain from alluding to a case recently in the Massachusetts General Hospital, in this city.

The patient was an individual who, from good circumstances, had fallen into the depths of poverty. He had been sick four days before his entrance, with what was supposed to be severe pleurisy, because he had severe pain in the left side of thorax, cough, fever, and *no expectoration.* On reading the history of the symptoms, as obtained by the House Physician, we were led to think that there was either pleurisy, or pericarditis. On percussion about the region of the heart, the sound was not remarkably flat, and the sounds of the heart were heard with nothing unnatural about them. Hence the idea of pericarditis was excluded. On percussion low down on back of chest, the sound was, in a small degree, less clear at left than on the other side. The respiratory murmur here was less full and good than on the other corresponding parts ; still there was nothing distinctly morbid about it. There was no resonance of the voice, no œgophony ; hence, according to physical signs, there was no pleurisy. On further examination over the upper part of the left cavity of the thorax, we found a solution of our difficulty. The upper lobe of the left lung ap-

peared to be in an inflamed state ; for, both behind, near the spine of scapula, and top of shoulder, and in front from below clavicle, there was much less sonoriety over left part of chest than over the right. Crepitous râle when the patient coughed, and bronchophony were heard under clavicle. Bronchophony at top of shoulder behind. Here there was pneumonia, if any trust could be held in the results of our examination. Repeated examinations only tended to confirm the diagnosis, by showing an increase of all the signs. Still, during the whole period that the patient lived, (nine days,) there was but once *any expectoration at all.* Once during examination, the exertion of sitting up in bed caused severer cough than usual, and two minute portions of rusty expectoration were spit upon his handkerchief.

At the post mortem examination, we found the upper part of both lungs hepatized, and in some parts the affection was passing into the purulent stage. It may be asked why, if auscultation and percussion told always the truth, the inflamed state of the right lung was not discovered. Simply, because after the first day the part was very slightly, if at all, examined ; inasmuch as previously, great disease was discovered in the left. There was carelessness on our part, but no argument can be brought against auscultation, from such a result. We are too apt to satisfy ourselves with the discovery, during life, of one serious affection, without constantly remembering that another, either similar or different, very commonly ensues to complicate the original affection.

Having thus examined the different diseases, let us touch upon a few symptoms, which seem worthy of notice.

1st. Voice. It is mentioned (10th) as rough and hoarse, and the throat at the same time is dry. Again, on the afternoon of 19th we find it muffled or " veiled" (voilée.)

Query ;— If this alteration of the voice be not dependent upon the affection of the velum palati, and upper part of pharynx, which caused a false membrane to be formed there ?

2d. Auscultatory phenomena. At the afternoon visit, Jan. 11th, the respiration was bronchial on expiration, high up on left part of back. The existence of tubercles would seem sufficient to explain this expiratory sound.

The auscultatory phenomena offered by the right lung are interesting, for there are two points, viz. 1, their accordance with the symptoms and autopsy. For example, the crepitous râle appeared first on the back, and gradually extended to the front. 2. We find in the last report, that the crepitous râle was heard at the first part of the examination, but it disappeared afterwards. It is important to know this. A crepitation is also at times not heard when the patient breathes calmly, or even when he draws a full inspiration. Then we must make the patient cough ; and no one has a right to say that crepitous râle cannot be heard in a certain portion of lung, until he has made his patient do so, without exciting it. In order to decide accurately, the examiner must have his ear always, during the act of coughing, placed upon the stethescope, or what is better, upon the chest itself.

4th. On 21st is reported, tremor of hand when it is placed on the right breast, none on left. The reporter meant not to say there was no tremor at left, but merely that there was much more of it at right than at the left. There is a tremor felt over every man's chest when he speaks, and this varies according to the state of the lungs or pleura. In this case, the hepatized lung was the cause. This tremor is often very marked under the clavicles of tuberculous patients, and at times, marks as clearly the apex that is most diseased, as auscultation and percussion do.

5th. At the autopsy, a partial pericarditis was discovered, which was latent during life. Only one symptom seems to have reference to this affection, viz. the extraordinary rapidity, and the irregularity of the pulse.

6th. The false membrane lining the bronchia is very curious, and has lately been pointed out as very common in pneumonia. We are unable to see it, in consequence of being accustomed to open the lungs by making long incisions through the hepatized portion, instead of following the course of the bronchia, and thus exposing all the tissues without injuring any of them.

7th. The inflammation of the cæcum and colon, as marked by redness, and shortness of the strips raised, correspond well with the symptoms to be referred to the alimentary canal; for, before the patient began to take antimony, the dejections were frequent.

CASE XVIII.

PNEUMONITIS.

Hospital la Pitié. Ward St. Paul, 13.

Under the care of M. Louis.

Jan. 9, 1833. — L. M., journeyman baker, æt. 66. This man knows nothing about the health of his parents, except that they were never palsied. He himself has been well nourished, has been accustomed to drink freely, and is of a strong constitution; though he has been subject to cough, without dyspnœa, for twenty or thirty years. He has generally had good digestion and appetite; bowels regular; not subject to diarrhœa; never any venereal disease. Five years ago, he was in this ward, with a disease resembling the present; fever, cough, without bloody sputa, and pain in left side of thorax; re-

mained in hospital five weeks, during which time had venesection performed, eighty leeches applied to chest, blisters to legs, &c. This was in April. Last year, about this time, was at la Charité four weeks, with same symptoms and pain in right side, to which was applied a blister, without any other treatment. Left there on January 16th, and since then has been strong and fat as ever. Thinks both attacks more severe than present one.

Present disease began on 5th, though patient had had six days before this, coryza, with dizziness, but without headache; also diminished appetite, increase of his accustomed cough, with some oppression, and some chills and thirst. On 5th, worked during day; and in night, after an hour's sleep, having gone to bed fatigued and somewhat intoxicated, he awoke, and immediately had severe chill, increase of cough, and great feebleness, and had very little more sleep during remainder of the night. In the morning dyspnœa was much increased, and he has kept bed since; has had much thirst; deglutition easy; no pain in throat; anorexy; little pain in abdomen first days of attack, none since; no diarrhœa; one dejection daily; urine has been very abundant, red and burning; has never had pain in chest at any time since attack; never bloody sputa; no headache, but bad dreams and troubled sleep; has had much pain in limbs; has had much heat, without sweat; has been growing always worse and worse until now; has not used any remedy, except simple infusions; has not been bled.

Now, tongue has a thick, brownish-white coat, moist; abdomen of natural form, without meteorism; a few whitish sputa in spit cup; pulse 108, small, regular; respiration 28, not very high; little sleep in night, no sweat; sub-crepitous râle in right back at lower half, becoming larger toward the base; no crepitation in front, and percussion there good.

(Syrup of violet flowers with oxymel. Gum potion. Venesection to ʒ xv. Aromatic potion, with grs. vi ant. tart. conditionally, *i. e.* if much worse at night.)

One, P. M. — Has been bled ʒ viii, or x; thinks respiration easier since venesection; resp. 26; auscultation as this morning. Left chest, behind, evidently smaller than right; less prominent. Color of his face more yellow, than natural; decidedly more so than that of patients about him.

Five, P. M. — p. 104, small; respiration as before; has been again bled to ʒ x.

Jan. 10. — Buff on the blood first drawn not so thick as that on the second; this latter is three lines thick, opake, yellow, not cupped. Feels feebler; face flushed; heat moderate; tremor of muscles of face and lips, without sensation of cold; motion of alæ nasi; pains in ears, tinnitus aurium; no headache; tongue moist, white; thirst; throat and abdomen as before; two dejections; pulse fuller than yesterday, but not than natural, 108, not hard, nor very feeble; resp. 28, rather high; pain at right side on cough, none at left; dyspnœa not great; sputa somewhat viscid, none rusty, some grayish, semitransparent, others yellow and opake. On percussion of upper half of right back, decidedly less sonorous than left in corresponding part; crepitous râle in every part of right back, fine, mixed with great bubbles above. Crepitous râle very fine at left, in its two upper thirds. No bronchial respiration anywhere; no evident resonance of voice at right back. In front, respiration is pure two inches from right clavicle, but below there is some crackling, rather fine. At left, in corresponding part, is mucous râle.

(Antimony not taken yesterday. Take antimony. Fifteen leeches to right side.)

Half past three, P. M. — Asleep; resp. 30; face pale; more yellow than yesterday; more emaciated; countenance pinched; p. 108; is disposed to sleep, even when one is by him; and when asleep, cheeks are protruded at each expiration, (as in smoking,) especially left.

Jan. 11. — Some good sleep this morning; six dejections; pulse as yesterday, except feeble; sputa are like a solution of glue, viscid, frothy, somewhat opake; he feels lighter than yesterday. On percussion, very sonorous in front; in both breasts respiration pure. Behind, at left, respiration and percussion good everywhere; at right, on percussion, obscure sound in two lower thirds; respiration obscure at middle, and there it is mixed with crepitous and sub-crepitous râle; sub-crepitous râle below.

(Add syrup of white poppies ℥ i to gum potion. Otherwise same prescription.)

Three, P. M. — No difference from usual afternoon reports.

Jan. 12. — Head a little elevated; p. 112, regular; resp. 28; tongue moist, yellowish at centre; sputa white, frothy, not viscid, nor rusty. On percussion at lower third of back, right side, obscure sound; respiration scarcely heard there, but some crepitous râle, larger and less continuous than yesterday; slight resonance of voice at same part. On upper half, large crackling, almost gargouillement; only a little vibratory râle at left; no resonance of voice; anteriorly, percussion and respiration everywhere good.

(Grs. x antimony. One and a half cups beef tea.)

Three, P. M. — Asleep; resp. 28, on back; cheeks often protruded during respiration, (twelve times per minute); hiccough, with great elevation of abdominal parietes; alæ nasi dilated, though not greatly; countenance much altered since entrance; emaciation; cheeks sunken, pinched; little mucous

secretion about eyes, which during sleep he opens occasionally for a moment; deeper yellow color of skin; mind not clear; apparently wandering; moves with ease from back to right side, and remains asleep; hiccoughing while in this latter position.

From this time until the 17th, the morning on which his death was reported, his organs and functions were as follows:

On the night of his death he had some delirium, but otherwise the brain was not remarkably affected; but, as before, he was inclined to sleep, even during visit, and made no complaints. The alimentary canal had no unusual symptoms; the tongue was moist and white on 14th; never any vomiting; generally two dejections a day. The respiration varied between 24 and 30; hiccough, puffing of cheeks occasionally until death; the expectoration was of a mucous character, mingled with saliva, towards end of life becoming greenish, opake, never viscid, generally rather abundant. Auscultation and percussion in front gave always good results, though respiration in left breast was louder than in right; behind, on the left, the percussion was always clear throughout, and respiration was heard, louder than in right, and pure, save on 15th, when sub-crepitous râle was heard in lower half. On 13th, percussion at upper half of right back was completely flat, and flatter than previously in lower part. Respiration was very bronchial, and broncophony existed in upper half; below, it was very obscure and mixed with sub-crepitous râle. On 14th, same, generally, except that broncophony and bronchial respiration were not so extensive in morning, but in P. M. more so than on the day before. This continued until death, with the addition of sub-crepitous râle heard over whole of right back, even gargouillement at upper part on 16th. The pulse varied from 104 to 120, but generally it was about 108 to

112. On 16th, P. M. its character was as at previous reports. Skin on 15th and 16th was said to be natural, without heat; face was flushed at times; his strength on 13th and 14th was quite good; could rise in bed.

The treatment was continued — on 13th, eight grs. antimony; on 14th, ten grs.; 15th and 16th, six grs.; on 13th, a blister was applied to right side of chest; on 15th, a weak infusion of polygala was ordered, and he was allowed an egg in addition to his beef tea. On 17th, he died during morning visit.

Autopsy, Jan. 19, at ten, A. M.

EXTERNALLY. — Emaciation moderate; four lines of fat over chest; muscles well; surface of body pale, without livid spots, on front, or sides; no œdema of legs.

CHEST. — *Pericardium* contains only a few drops of serous fluid, and surface seems dry.

Heart of middling size; base and right edge surrounded by considerable fat; in right ventricle a small yellow coagulum; pulmonary artery healthy; sigmoid valves of aorta a little thickened and have yellow opake spots, most towards their base and one at free edge; in other parts nothing remarkable.

No serous fluid in either pleura.

Left lung. — Adherent by cellular membrane, not very strongly, in two-thirds of its outer portion; lung large, collapsing slightly at anterior edge, where the vesicles are much dilated, especially for two or three inches of its middle; less dilated at apex; same dilatation of vesicles of diaphragmatic portion of lower lobe, though less than in the upper; this lobe heavier than upper, contains a moderate quantity of red frothy fluid, is crepitating, yields more easy to finger than healthy organ does; and offers to view many little black spots, which do not disappear under pressure. The bronchia of

lower lobe contain a small quantity of whitish, opake, milky mucus; this same liquid is in the bronchia of the upper lobes, where it is especially abundant near their division; the mucous membrane has its usual polish, and is so thin that it can hardly be perceived over cartilages. Toward the base the bronchia have two and a half lines in diameter but are thin and transparent; those going toward the anterior edge, where the vesicles are most dilated, are of moderate size and transparent, but have no mucus.

Right lung, heavy, large; adheres from apex to base in front and behind, partly by old, cellular and firm, partly by recent and soft adhesions. The vesicles are dilated near free edge of lung, though less than at left. This edge, from three to four inches from apex downward, is light, soft, crepitating and healthy, except the emphysema. Bronchia here are pale and contain the same mucus as at left. Two and a half inches of lower part of upper lobe is hard, firm and grayish internally. It has many black spots, when cut surface is seen, except near periphery, where it is uniformly red; on incision there flows a little reddish fluid, not frothy; the cut surface is granulated, is more firm and less friable than hepatized lungs usually are, and the portion thus described sinks in water. *Middle lobe* very small and healthy. Whole of *lower lobe*, red, firm, granulated, friable, does not crepitate, contains no air; its bronchia are little larger than those of left lung and contain similar fluid; mucous membrane is thin and polished.

Abdomen. — *Peritoneum* rather dry; fat in omentum and parietes of abdomen.

Liver rather pale, ordinary size, easily penetrated by finger.

Gall-bladder distended with thick, yellow bile, and containing many flocculi, which are easily broken down; mucous membrane normal.

Stomach, one third less in size than usual, contains two ounces of a light yellow, rather fluid liquid; internal face generally pale, but pointed with red for an inch about cardiac orifice and a little on anterior face. In two-fifths of organ towards pylorus, especially on the part most remote from this opening, the mucous membrane is mamelonated; on small curvature for an inch in breadth it is less so; strips three or four lines in cul-de-sac, eight to ten small curvature, seven to eight great curvature; and it is no where thicker than usual, even where mamelonated.

Small intestines, of moderate size, without any redness externally; contain in first and last third a quantity of yellow liquid mingled with mucus; in middle third a little whitish mucus only. Mucous membrane pale, very thin, not of usual aspect; but has numerous brilliant points, as if sanded, and does not allow of strips being raised on account of the laxity of cellular membrane beneath it.

Large intestines, of moderate size; contain pretty large quantity of yellow matter, like pea-soup, becoming thick and fecal at the lower part. Internal surface pale, yellowish; mucous membrane thin; gives strips from ten to twelve lines long, except in ten first inches; no crypts discovered.

Neck. — *Œsophagus*. The epidermis is well throughout, except in last five inches, where are numerous ulcers; some round, one to two lines in diameter; others irregular, six to seven lines in length and one to three broad; edges yellow, as are also their surfaces, and in some the muscular fibres are exposed.

Pharynx; in lower two-third of this part are many patches of an opake, yellowish, white color; some ulcerated, some not; some also near base of tongue, and on sides of epiglottis; one of these at left side is circular, covered with a little detritus,

which is easily removed; and around this detritus, at some points, is seen a little furrow, separating it from the surrounding tissue, and at other points it joins or rather is continuous with the mucous membrane, which is apparently healthy, is thin and of its natural consistence; this patch is a quarter of a line thick; at the side of it, in front of the epiglottis, is an evident ulcer, which is oval, four lines in longest diameter; at the right of this last is another, irregular in shape, one inch long, two or three lines in breadth and corresponding to patch first spoken of, it has an unequal surface, and elevated edges. On the same side is another very irregularly formed patch, one inch long, somewhat destroyed in some points, entirely so in others. On left side of pharynx are several oval ulcers, of same aspect as above described, and about which the epithelium is thickened and opake. *Epiglottis* pale, but nearly of double the usual thickness; it is evidently ulcerated on its lateral edge which is more than a line thick. Lateral ligaments a little œdematous. Two little ulcers similar to others on lower part of vocal chords. Mucus rather abundant in *trachea*, the sub-mucous tissue of which is a little injected.

Head.—Effusion very abundant under *arachnoid* membrane; itself not so transparent as usual, over the furrows between the convolutions. On the front of *right anterior lobe* is a destruction of the gray substance of brain for the space of an inch and a half—half millimetre in depth. Partial destruction near *middle lobe* to the extent of a line or two; same appearance, more rarely, over prominent portions of several of the convolutions, at the back part on same side. On the *left*, the *anterior lobe* only is affected, and this less so than on the right. Both ventricles contain five or six spoonfuls of serous fluid. *Septum lucidum*, *cerebellum*, *medulla oblongata* all well. Substance of brain firm, not injected.

Remarks by the Reporter. — 1st. The upper part of right lung being harder than the lower, and its gray central aspect are proofs of its having been longer inflamed.

2d. This case is an apparent exception to the law that the œsophagus is found ulcerated in typhus fever only; but in typhus, a gangrenous affection is not, as in this case, the cause of ulceration.

3d. When Louis wrote on typhus fever, he had never seen a case similar to this in pneumonia.

Remarks by Henry I. Bowditch, M. D. — On reviewing this interesting case, we find the following points worthy of notice.

1st. Cough, without dyspnœa, for twenty or thirty years. To what was it owing? At the autopsy, emphysema was found in both lungs. This affection was probably the cause of the long cough. The symptoms, or rather the want of serious symptoms, ought to have led us to this diagnosis before death. No organic affection, such as tubercles or disease of the heart, could have lasted so long without producing greater trouble in the economy than a slight cough.

2d. The two previous attacks of thoracic disease are to be noted, for this reason, viz.; some pathologists say that a man who has once had pneumonia, if attacked anew, is more likely to recover than one attacked for the first time; true. Now the history of our patient, and the autopsy prove that, at former periods he had suffered from severe pleurisy of both sides; and from the symptoms as related by him, we have every reason to believe that pneumonia existed also at these times.

3d. On entrance at the hospital, there was no doubt of the existence of pneumonia combined with pleurisy. The

acute symptoms, and the physical signs proved their existence, though the expectoration had few characteristic marks.

4th. To what was the yellowness of the skin to be attributed? The autopsy does not tell us.

5th. Andral says the mucous membrane of the bronchia, near a hepatized portion of lung, is always inflamed. This case proves his assertion to be incorrect. In fact the membrane was remarkably thin and transparent.

6th. The affection of the pharynx and parts connected with it, I well remember, astonished us all. There was no doubt of the ulcers having a gangrenous origin, because some of the spots were nearly separated from the healthy parts adjacent, in the same way that a gangrened part is thrown off from any portion of the body. At first sight, it appeared to us that the affection was an exception to the law established by Louis in his work on typhus fever. This law is thus expressed by Louis. "Out of seventy cases of persons dying of other acute diseases than fever, I have not found a single example of ulceration of this part, (pharynx). If these facts be not sufficiently numerous to allow us to affirm that ulceration of the pharynx takes place only in the course of affections of the nature of those, concerning which we are now treating, still they render the fact very probable, and make these ulcerations very important lesions, and, as we shall see hereafter, one of the secondary anatomical characteristics of this disease." In the case before us there was no real exception to the rule, because Louis, in using the term ulceration, did not mean to include gangrenous destruction of the mucous membrane.

But while upon this subject, I will allude to the exceptions to the law of ulceration of the small intestines, which makes

that affection peculiar to typhus fever and phthisis. Not long since a young man who had been supercargo to the East Indies, entered the Massachusetts General Hospital, suffering from chronic diarrhœa. He had been suffering for a long time, and while with us his only complaint was this constant diarrhœa; — he was extremely emaciated. On the autopsy being made, extensive ulceration, with some cicatrices, were found in the small intestines, and not the least appearance of tubercle in any part of the body; all the cavities having been opened, and the lungs in particular cut into most minute portions, for the special object of deciding the point. This man had the diarrhœa which those physicians, who reside in sea-port towns, see often in seamen who return from a sojourn in tropical climates.

Again, I have seen cases of small-pox, and have notes of one of them, in which ulcers were found in the intestines. There were no tubercles in the lungs, which were hepatized and gangrenous; though I confess I did not examine the different organs, especially with reference to tubercles, as in the former case.

7th. Ought we not to have expected an alteration of the voice from the ulceration of the vocal chords? We all know that in phthisis continued hoarseness, sometimes complete aphony is produced by ulceration of the larynx.

Again. Is not the fact of the ulceration of the vocal chords being of the same nature, as those of the pharynx and œsophagus, another proof against the idea of the former ulcers being caused by antimony taken into the mouth? Could a solution of antimony have entered the larynx without causing very great distress? If there were any, no note is made of it.

8th. The affection of the convolutions of the brain was singular. Andral describes it in his pathological anatomy. In

this case I cannot find any *peculiar* symptom which can be connected with it, though there were symptoms marking an affection of the brain. Lallemand, P. de Chatelet and Martinet I have consulted, without finding in their respective works upon the brain and its membranes any analogous, cases.

CASE XIX.

PNEUMONITIS.

Hospital la Pitié. Ward St. Paul, 46.

Under the care of M. Louis.

May 22, 1833. — Coulomb, farrier, æt. 45. This man was born at St. Denis and has always been there; never a soldier; his father is now living, æt. 74, is well and is not subject to disease of chest, has not had asthma nor palsy. Mother died aged 66, after a sickness of a month; asthmatic from age of 36, but never palsied; one sister, well, æt. 49, never asthmatic. His breath was not short in infancy; could run as well as his companions; never epistaxis; had chancre and bubo at 18, during fifty days; once a slight gonorrhea; married at 21; had six sons; two dead, one at 4 years, the other at 6 months. He has never had any acute disease, except at the age of 23, when he had a partial palsy of all his limbs preventing work during six weeks; but the account he gives of this affection is very indefinite; no acute disease since; no cholera; is very subject to catarrh, and it lasts only two or three days; never hæmoptysis; has been well this winter; has been accustomed to intoxication from wine at least once a week; eyes brown; hair dark brown; strong large limbs; generally rather pale than red; is five feet four inches high.

Present disease. During five or six days previous to 18th,

had less appetite than usual, and had a little cough; no local or other general symptoms; no chills, heat nor thirst, no vomiting nor diarrhœa. On 18th, appetite entirely gone; 19th, cough more marked with a little expectoration; worked with sufficient strength this day, and was somewhat intoxicated, and while in this state received a blow in left breast, which he has felt since. On 20th, cough, and expectoration of a reddish-yellow color, with great thirst; pain along trachea; no difficulty of deglutition, nor nausea, nor vomiting; no pain in abdomen, nor diarrhœa; but has had much oppression and pain in both sides of chest about mammæ, most at left; headache, heat with sweats, no chill, no palpitation. Since 20th has kept bed, has had little sleep since; cough and oppression at chest have increased; headache not violent except under severe cough; urine red and burning since 20th; has taken no food and undergone no treatment; has had a kind of numbness of limbs for three past days; went in carriage to "Bureau Central," and walked here from that place in half an hour (about a mile.)

Now, countenance pale, fatigued, anxious; head elevated; memory and intelligence good; a little dilatation of alæ nasi; tongue white, moist, thick, not painful; no pain in throat; deglutition easy; thirst, no appetite; no pain in abdomen, which is soft, well formed, without meteorism and without pain under pressure; one dejection to-day, black, not liquid; voice (to reporter) seems a little hoarse, though patient says it is not so; pain quite severe about left mamma, less about right; cough frequent, increasing pain in side; sputa mostly liquid and of a dirty reddish color; scanty, with some frothy saliva, having a very unpleasant, though not exactly a gangrenous odour; after long examination, one sputum yellow, semi-transparent, viscid, containing air. P. 108, full, hard; when lying, drowsy; respiration under similar circumstances 36, abdominal;

skin hot; urine as before. On percussion, not very sonorous anywhere; perhaps rather more so under right than left clavicle; an expiration is heard under both, but it is longer and resonance of voice is louder under right than left; but generally, in front, vesicular expansion is good and full throughout. In upper third, or half of left back and around to side are bronchial respiration and bronchophony; the former heard both in inspiration and expiration. Elsewhere, behind, respiration is very obscure, except at right summit. At left, where there is bronchial respiration, a crepitous râle is also heard at times; and a sub-crepitous râle is heard in lower half of both; but auscultation not satisfactory from inability of patient to breathe properly. Impulse of heart moderate; its sound not heard under right clavicle.

May 23. — No treatment as yet; sleep pretty good last night, no delirium. Tongue, expectoration, respiration, and pulse as yesterday; pain at left side less; breath not fetid; some headache, without dizziness, this morning; two very small liquid yellow dejections, without pain. Bronchial respiration has extended around side and to mamma in front; not very marked above mamma, except perhaps for half an inch. Behind, at left, more crepitation and more distinct than last evening; none at all at right.

(Syrup of Violet flowers. Venesection to ℥ xv. Gum potion. Sprinkling of solution of chloride of lime.)

Four, P. M. — p. 104; resp. 42; blood flowed well and is now in a large clot, with a buff upon it half line in thickness, firm. Since bleeding pain relieved, but feels feeble; nausea after drinking; auscultation as this morning, except that there is no râle; he perceives no odour in his sputa; other symptoms the same as before.

May 24. — (Venesection again. Prescription the same.)

Three, P. M. — p. 116; resp. 32, with very slight motion of chest, much of abdomen; skin quite warm, moist, sweat in drops on face; was bled this morning ℥ xv, and feels as yesterday, — relieved but feebler since; blood buffed, not cupped; clot as large as the vessel containing it, firm and with very little serum in it; has felt a little dizzy since bleeding; tongue as before; a little pain in swallowing; no dejection; much urine; little pain on pressing abdomen; pain still in chest, slight, about left mamma; cough often, not increasing pain; two sputa, white, frothy with yellow tint; restlessness; bronchial respiration distinct in left breast. In left back crepitation most marked at middle. Some crackling at right back occasionally.

The patient died at three, A. M., of the 27th, and the following is the state of his symptoms as they appeared on the mornings of 25th and 26th. At the visits his mind was always clear, though he was inclined to fall asleep; this latter inclination increased so as to be very great the day before death; delirium on night of 25th and 26th; was changing his position continually; the tongue changed from yellow to brown and was covered with a thick, gluey coat; as were also the teeth on 26th; thirst as before; green matter vomited on 26th; diarrhœa on both days; three dejections on 25th; five on 26th before morning visit, with relief to pectoral symptoms; urine as before. The pulse was always at 124, and respiration at 44; skin hot, sweat about head; cough always great; expectoration always had a peculiar odour, though not gangrenous; it was a little frothy, floated on water; the strength remained pretty good, could get out of bed to go to stool on both days. Auscultation and percussion gave the same general results as previously. The

treatment is not mentioned save on 26th, when venesection to ʒ vi, and grs. v, of ant. tart. were ordered.

On 27th, at three, A. M., having passed the previous day tranquilly, he arose from his bed in delirium, and threw himself upon one adjacent to him, and soon after expired.

Autopsy, May 27th, nine, A. M.

EXTERIOR. — Pale; no œdema.

ABDOMEN. — *Stomach*, three times as large as usual; contains a little clear, watery fluid; its internal surface is of a grayish-white, generally, except in a few spots, where it is a little red; a little emphysema under coats; mamelonated appearance for the space of three inches in diameter on anterior face; strips everywhere of natural thickness, except, perhaps, where it is mamelonated; there, perhaps, a little thicker than natural.

Small intestines, of a good volume, contain a little light-yellow liquid; pale through almost whole of its extent; but in some rare spots slight sub-mucous injection; everywhere membrane is thin, and gives strips of three to four lines above, six below; Brunner's glands few, below, natural; mesenteric glands small, of natural pink hue.

Large intestines, of small size; contain a yellow liquid; mucous membrane pale, thin; giving strips from twelve to fifteen lines long.

Liver, large, especially in its great lobe; of a pale-yellow color; of natural consistence; the two substances very distinct, and in equal proportions; not much granulated; contains little blood. *Gall-bladder* small, containing dark, greenish, not very viscid bile.

Spleen, natural color; moderate size; texture rather soft.

Kidneys. — External membrane easily detached; thin and natural; surface of organ polished and natural; cortical sub-

stance composed of two colors, running in lines from the surface to the centre, one red, the other slightly yellowish-white, alternating with each other; in central parts, the substance is likewise marked by the same colors, but in dots; both kidneys large. *Bladder*, moderate size; mucous substance a little injected; strips from twelve to sixteen lines long.

Chest. — *Left lung* adherent at upper part, posteriorly and laterally, by a membrane that is very thin and recent. The lung itself is heavy; its upper lobe is in the third stage of inflammation, throughout its whole extent, except three or four inches space from anterior edge, along front of lung. Behind, this lobe is yellow, softened, granulated; contains no air, but much pus; some three or four lobules are not so far advanced, but have a red hue. Lower lobe partly like upper; yellow; greater portion of it in first, or second stage of inflammation; bronchia everywhere in upper lobe filled with pus; they are thin, pale and smooth; in lower lobe bronchia filled with pus; but this lobe has less fluid than the upper. No portion of lungs has gangrenous odour or aspect.

Right lung, partially adherent; upper part of upper lobe is between first and second stage of inflammation; lower part is yellow, but less advanced in suppuration than the other lung in same part. The lower lobe, as is the greater part of this lung, is much lighter than the other, crepitates, and contains a quantity of red, frothy fluid. Bronchia same as in the other lung.

Pericardium contains four or five ounces clear serous fluid. *Heart* natural in color and consistence.

Neck. — *Larynx and trachea* somewhat red; strips from sixteen to eighteen lines long. *Epiglottis* looks as if mamelonated; little elevations, without orifices.

Head. — *Pia mater* moderately injected, easily detached from brain, effusion under it very slight; gray substance of

brain has three lines of thickness ; in some parts distinguished with difficulty ; medullary substance moderately injected, with points of a lilac color after exposure ; of good firmness; as are also the remainder of central parts. Ventricles contain scarce a drop of liquid. *Medulla oblongata, annular protuberance*, of good color and consistence.

By the Editor. — This case is less accurately reported than some of the others ; but there will be found a general accordance between the physical signs and the state of the lungs, as ascertained after death. The blow, which the patient received on the 19th, does not seem to have had any important effect on the disease. The disease had evidently begun before that. The left lung was more diseased than the right, and the blow was on the left breast. But the disease was worse on the posterior, than on the anterior part of the lung, and the blow was on the front.

CASE XX.

PNEUMONITIS.

Hospital la Pitié. Ward St. Paul, 8.

Under the care of M. Louis.

April 3, 1833. — N. P., a mason, æt. 23 ; fair complexion ; hair clear brown ; eyes gray ; rather large than small frame ; not much flesh. Born at Oulon, in Department of la Creuse ; has been in Paris only since the 31st March. From infancy has been subject to epistaxis several times every year. At the age of 10 he had a tertian intermittent fever, which lasted a year, and has never had any grave disease since ; not been sub-

ject to colds. The 1st of March, *i. e.* four weeks before quitting his part of the country, he took cold, had cough and expectoration without any pain in side, dyspnœa, diminution of appetite, or emaciation. The 26th March he quited Oulon for Paris, and went a hundred leagues on foot; and at his departure his health was entirely good, except that he had the cough above-mentioned; his appetite and strength were as usual. On the 27th, he felt a slight pain in left side of chest, accompanied by oppression, and then the appetite began to diminish; the 28th, pain in side and oppression increased; then the anorexy was complete, and he had great thirst. On lying down in the evening there occurred chills, followed by heat, with pain in head and loins; cough had diminished since pain in side occurred. All these symptoms continued during the following day, and on 29th, the sputa were yellowish and reddish in color. The pain in side and dyspnœa increased progressively until the 1st of April; after that day pain was gone, but oppression remained. On the 28th and three following days, he bled from nose twice, daily. From the beginning he has never had sore throat, nausea, vomiting, pain in abdomen, nor diarrhœa; no dejection for three days. Urine red and burning from the 29th.

On the 27th and 28th he walked fourteen leagues a day; on 29th, ten leagues only; on 30th, after walking three in the morning, he took the diligence and arrived at Paris on the morning of the 31st. From that time his weakness has increased, and he has kept the bed; and to-day he was brought upon a litter to the hospital, being unable to walk; emaciation from 27th, and from this time, having no appetite, he has hardly eaten anything; but during the four days' journey he had much thirst, and drank much water, and nearly two bottles, or a bottle and a half of wine daily; a half bottle at each

repast; his companions being wont to eat three or four times a day. Has undergone no treatment.

Now, four, P. M., April 3d. — Face slightly flushed; expression natural, intelligence sufficient, although slow; memory good; dilatation of alæ nasi at each inspiration; a little blood adhering about nose; herpetic eruption about upper lip, which he says has existed six days; lips a little dry, tongue a little redder than lips, a little dry, and with a white coat; no soreness of throat; thirst; deglutition easy; no appetite; no nausea; no dejection for three days; abdomen well formed, rather full than otherwise, not very sonorous, without pain, except in right iliac region, where it is a little sensible to pressure; it is supple, except in left hypochondrium, where for some space is felt a tumor, whose edge is two inches below the cartilages of ribs; it has the form of the spleen enlarged; there are neither spots on body, nor gurgling in bowels. Cough rare, not once during hour past; expectoration nothing since entrance; oppression; respiration abdominal, and 32 per minute. On percussion, very obscure sound behind at left; in the middle three fifths are heard bronchial respiration, and bronchophony, and, from time to time, a crepitous and sub-crepitous râle: decubitus upon the back most of the time, but easier at right than left. Headache; no dizziness; no buzzing in ears, although he has had some within two or three days. Urine red and burning. Pulse 112, regular, a little hard; skin warm, dry; sweat profuse yesterday, so as to require the change of shirt; this for the first time.

April 4th. — Being interrogated by M. Louis, he gives the same answers as to me yesterday, in relation to his health previous to the four weeks of cough, and declares still, the absence of all local symptoms during that time. Little sleep during night, pulse less frequent than last evening. M. Louis

having decided upon the existence of pneumonia, with only slight febrile symptoms, ordered venesection conditionally in evening, and the following prescription.

(Syrup of violet flowers mixed with gum syrup. Gum potion. Burgundy pitch plaster upon left side.)

Four, P. M. — Venesection not performed; tongue, thirst, anorexy, abdomen, as yesterday; no dejection; cough as before; expectoration small in quantity, yellowish, or reddish, with very little air in it; resp. 32; percussion less sonorous at left than at right, in front. Behind, at left, bronchial respiration less marked and less in extent, although still marked at lower angle of scapula, where it is unequivocal, and accompanied by a very distinct bronchophony; crepitous and subcrepitous râle more numerous in two lower thirds, and extend laterally, and even in front to mamma. P. 84; skin warm, face covered with sweat; headache.

(Same prescription. Strict diet.)

April 5, five, P. M. — Sweat last night so as to wet two shirts. P. 60, resp. 24; no dilatation of alæ nasi; less thirst and oppression; appetite begins to return; skin less hot; no headache; tongue cleaner; bronchial respiration at left in spot mentioned yesterday, and is mixed with crepitation; the bronchophony is also less marked.

April 6. — Progressive improvement in general and local symptoms; no sweat in night; appetite increased. Pulse as yesterday; resp. 20. Vesicular expansion begins to be heard at left behind, mingled with a râle which becomes more moist; expectoration nearly two ounces in last twenty-four hours, like gruel, with some sputa, yellowish and opake.

(Three cups beef tea.)

April 7. — Same state. In the evening, while examining the right side of chest with more attention than before, I find

that the right post-clavicular region is a little more depressed than the left, and is a little less sonorous. Below right clavicle the vesicular expansion is not so perfect, and there is an expiration evidently more prolonged than below the left; it has also a little of the character of bronchial respiration; a slight resonance of the voice at the summit of right shoulder behind, and there inspiration coarse, expiration bronchial and lengthened; bronchophony much more marked at this summit than at left. No râle in front nor on back.

The days following until the 12th, when he left the hospital, the convalescence continued to go on; his appetite and strength increased; on 8th, he took soup, and afterwards bread; he walked in the garden on the 10th. Pulse on 9th, at evening, 90; no longer sweats at night; always a little subcrepitous râle at lower angle of left scapula; cough continued, though less; phenomena of auscultation, already indicated as existing at summit of right lung, were observed several times by myself and others, and remained always the same. He went out convalescent 12th, contrary to the advice of M. Louis, and before he had fully recovered his strength.

Remarks by the Reporter. — This case appears to me to be interesting under many points of view.

1st. We see an acute pneumonia which lasted fifteen days, and cured itself, without any treatment; and this cure was accomplished in spite of two circumstances, which we are wont to consider very hurtful in acute diseases, viz; violent and long continued physical exercise; and the use of alcoholic liquors, during the first four days. Our patient walked ten to fourteen leagues a day, during three days, and three leagues the fourth; and during this time, he drank nearly two bottles of wine a day; the general and local symptoms being from

the first so well marked, as to leave no doubt as to the nature of the disease at this early period. Now there are two points to be noticed, viz. his remarkable preservation of strength, notwithstanding he was affected with so grave a malady; and the small effect, which exercise and stimulating drinks appear to have had upon the march and termination of the disease.

2d. There is another point of view, under which this patient is still more interesting, viz. he seems to be tuberculous. This circumstance should be particularly noted; and in order to render it still more worthy of examination, I will give rapid sketches of two other similar cases, of which I have detailed accounts, and in this way we may see the march of pneumonia, as sometimes exhibited in tuberculous cases.

I shall give details only sufficient to prove that these patients were phthisical, and that they had pneumonia, terminated by recovery.

Observation II. — A day-laborer, æt. 49, entered la Pitié, Dec. 3d, 1832, saying he had been sick eight days. Cough, oppression, obscurity of sound on percussion, behind, at left in lower half of the chest, where is heard a fine crepitous rattle; no expectoration; no fever; was bled, and râles became less numerous and smaller. Our patient, after some time, becomes convalescent, but remains in hospital and begins to eat. But on Jan. 15th, he is again seized with pneumonia, and this was more severe than the other. My attention was thus again led to him; he had previously, for two or three weeks, been eating three quarters of a large loaf of bread a day. But to recommence his history. It appears that in the month of Jan., 1832, the patient had begun to cough without expectoration, and at the same time his appetite diminished, as well as his strength and flesh. These symptoms continued to

increase, without hœmoptysis, or pain in chest, or sensible dyspnœa, until the month of August. At this period he entered la Pitié, in the wards of M. Piorry, with headache, vomiting and diarrhœa, without cramps ; having also, pain in right side, increase of cough, and much oppression. After having remained under care of M. Piorry nearly two months, he left, having been able to eat three quarters of a loaf, for some time previous.

Some weeks after this period, he entered the wards of M. Louis, and was in the state described, at the beginning of the observation ; and after twenty days of convalescence, during which the cough was always more or less troublesome, and the breath always embarrassed, he was taken again with symptoms, such as I shall now indicate.

On the evening of the 13th January, chill followed by heat, thirst, anorexia, acceleration of the pulse, pain in right side of chest, increase of cough and of dyspnœa. Was bled that evening, and again on the following morning, and after the latter he felt a little relieved. On 16th, expectoration in part white, frothy ; partly the color of barley-candy, more viscid, and semi-transparent. It preserved this appearance until 19th, after which it was always opake, yellowish, and not abundant. On auscultation crepitous râle fine, abundant through whole of right breast ; which was soon followed by bronchial respiration, especially in expiration, and by bronchophony, well marked through the space of four inches below the right clavicle, and a prolonged expiration under the mamma and in lateral region on the same side. On the back, same side, same phenomena less marked, and less extensive. At left, was heard always a sub-crepitous râle behind. Pulse from 15th to 18th, was 120 ; from 18th to 28th, from 106 to 96 ; the first of Feb. 72, and it did not rise afterwards beyond 84, even in the evening.

The respiration was in the beginning very much troubled, and accelerated ; 36, the first three days ; afterward 30, and finally 24, and even 20. Heat of skin very great at first, diminished afterwards. The patient recovered his strength very slowly, and in March quitted the hospital, having been able to eat three quarters of a loaf of bread per day, during two or three weeks. The cough and dyspnœa continued always, and, when he left, the chest was in the following state.

At right, below the clavicle, and at summit behind of the same side, there was a bronchial inspiration and expiration, with bronchophony, well marked. At left in corresponding parts, were the same phenomena, only much less marked. The crepitous râle had disappeared from the front, save in the lower quarter of right side ; but there was an expiration somewhat prolonged through the whole right breast; the same was heard only below the clavicle at the left. Behind were subcrepitous and crepitous râles on both sides.

Here are, I think, the proofs of a very severe and extensive pneumonia, followed by a cure, in a tuberculous patient.

Observation III. — A house-keeper, æt. 68, entered la Pitié, April 7, 1833. She told us that during a year previous she had been emaciating, but this emaciation had not been accompanied by cough, nor hœmoptysis, nor expectoration, nor by chills, nor heat, nor diminution of appetite; but for three or four months she had suffered from dyspnœa and pains between the shoulders, without pain in sides of chest. On 29th and 30th of March, she experienced a general uneasiness, with a slight loss of appetite, without pain, or any local symptom. On evening of 31st, pain in left side, cough, without expectoration, oppression at chest, heat, pain in head and limbs, thirst and complete anorexy. These symptoms increased, notwithstanding a small

bleeding, and the application of fifteen leeches on the 6th, and she entered the hospital in a very weak state on 7th. On the following morning she was as follows. Appearance of great feebleness; voice broken; very marked oppression at chest; tongue not moist, color of coffee; complete anorexy; very intense thirst; one or two liquid dejections daily, without pain; cough without expectoration; pain in left side; resp. 36. Right post-clavicular region more depressed than left; left side of chest in front appears more prominent than the other. On percussion, the left breast very flat throughout its whole extent; as is also the left post-clavicular region. At right this region is less flat, although it is not very sonorous. Left axilla entirely flat. Below left clavicle, the vesicular expansion, or proper murmur of respiration, is almost nothing, and the expiratory sound is prolonged and nearly bronchial; and a little lower both inspiration and expiration are evidently bronchial; and through the whole of this breast is heard a crepitous râle, not very copious, and only after coughing at upper part; but without cough, and more copious at the lower part. Bronchophony, most marked, is heard a little below left mamma. In axilla of this side no vesicular expansion is heard, and expiration is very bronchial, with bronchophony, almost pectoriloquy. At the left summit, behind, are the same phenomena, with a little crepitous râle after cough. Below, on left back, respiration vesicular and good. In the right breast, towards top, for the space of two inches, expansion evidently less strong and less perfect than below; and at the same place, the expiratory sound is loud and prolonged, and a little resonance of the voice is heard there. At the right summit, behind, expansion very imperfect, expiration prolonged and bronchial; strong resonance of voice; impulse of heart moderately strong, heard below right clavicle, and also, very

strong in left axilla. P. 96; sometimes intermittent. She took antimony from four to six grs. daily during eight days.

April 9. — P. at 72, and it always, with very few exceptions, remained the same, until the patient left the hospital. Resp. on 9th, was 27, then 24, afterward 20; the oppression and heat of skin diminished gradually; pain in side remained until 13th, and then ceased; cough diminished. Even after all the rational, local symptoms, had much diminished, and the fever had abated; and the patient had begun to recover strength and appetite, the phenomena of auscultation remained the same very nearly; the percussion, however, becoming less flat anteriorly at left; and bronchial respiration mingled with a crepitation much more abundant than before. This amelioration of the physical signs, on this side, gradually progressed, although slowly, while auscultation and percussion always gave the same results at right summit, as they did the first day. The patient went down into the garden on 22d, and the succeeding days; and on 25th, having for three or four days previous taken only the eighth of a loaf, she went out convalescent, although by no means entirely cured of the pneumonia, which brought her to the hospital.

We have just read three cases of pneumonia, all of which have pursued their wonted courses, and have been cured, and every one was tuberculous. Such cases are not rare. MM. Louis and Andral have already, in their respective works, indicated that pneumonia is cured easily in phthisical patients. But they have given no examples of it, and, consequently, we do not know in detail, what are the special characters, if there be such, of these cases. M. Andral has, it is true, given two observations of pneumonia in tubercular patients; but they differ much from ours: 1st, in that the disease was already far advanced; 2d, that the pneumonia is not described as having

passed through all its usual periods; 3d, it was fatal in both. It is precisely the contrary of the above, that makes these three cases peculiarly interesting.

Let us observe some of the circumstances, which appear to connect themselves with pneumonia, occurring in patients of this kind; or, at least, those which seem common to our patients.

1st. Seat of the inflammation. In all three, the upper lobe was chiefly affected. In addition to this we find in the two last, the auscultatory phenomena were more marked, and in one (III.) they were found almost exclusively, in the anterior part of the lung. It was then at the anterior and superior part of the lung that pneumonia existed; which is rarely the case in common pneumonia, in which the physical signs are most marked at the base and posterior portion of organs. And not only were the parts, mentioned above, the principal seat of inflammation during its acute stage; but after the convalescence, when the auscultatory signs had disappeared or greatly diminished in other parts, it was at the summit, in all three cases, that the marks of disease still remained; so that when the patients went out from the hospital, there was in each case a respiration more or less bronchial, and a bronchophony more or less marked in the upper part of the chest. So that here we find the physical signs differing from those commonly observed in subjects, otherwise sound, who have been affected with pneumonia; for in them the physical signs, which so often remain for a long time, after convalescence has been manifested in other respects, are foun d at the lower part of the back, instead of the regions about the clavicles and above the scapula.

2d. Physical signs. There seems not to be any difference as to those signs, in cases of pneumonia occurring in a healthy subject and those occurring in tuberculous patients, during the course of the disease. But at its termination, when convalescence is well established, there is one distinction which

appears to me worthy of being remarked upon. In convalescence from pneumonia, in a healthy man, we hear the crepitous and sub-crepitous râle, but the bronchial respiration and bronchophony disappear soon, and vesicular expansion comes on. In the tuberculous it is precisely these bronchial characters, which remain in a space more or less marked; and it was these that still existed at the time, when two of our patients (II, III.) left the hospital.

3d. There is another distinction to be made, which is not uninteresting by any means, between the physical signs of hepatization of the summit of one lung, and the same signs at the summit of the other, where we presume tubercles to exist, without pneumonia. It is especially in the first and third of our observations, that these signs can be distinguished the most easily. First, some of these signs were the same at the summit of both lungs; for we have stated that the vesicular expansion was imperfect, or, absolutely nothing; that the expiratory sound was bronchial or prolonged; and that the voice resounded more or less to the ear. But, secondly, at the summit affected with pneumonia, there was another sign which did not exist at the tuberculous apex. This sign was the crepitous râle, which either existed at the entrance of the patient, or after convalescence began. Thirdly, and this is of the highest importance, while the physical signs varied in the part affected with pneumonia, during four or five days, those observed in the other lung remained always the same. But setting aside these distinctions, I wish to draw your attention to the signs which existed in both sides, and especially at one of them, to wit, the expiration; which was sometimes very bronchial, at others, only what I call prolonged. And upon this point, perhaps, it will be permitted me to give the result of what I have observed, during some time past.

About fifteen months ago, when I began to give much atten-

tion to auscultation, I perceived that very often, at an early stage of tubercles, the sound of expiration at the summit of the lungs was more or less prolonged on the side, which other physical signs showed to be most affected. Soon, this sign became, for me, one of the first which struck my ear in similar cases ; and I tried to analyze in each case the respiration, *i. e.* I tried, while listening with much attention, to gain a clear and distinct idea of inspiration and expiration, on both sides. After a short time I observed, that nearly always, when I analyzed the sound, which M. Louis calls coarse, (*rude*) below one or both clavicles, the vesicular expansion was more or less imperfect. By this expression I mean, that it finished more quickly and suddenly, and often with less noise than is usual in healthy respiration, or what is still better, than in other portions of the lung, that were healthy.

In addition to this change in the expansion, I heard a *prolonged expiration*, which had more or less of the bronchial character. I thought from this that *expiration* may become bronchial, before *inspiration* does. Since the period above alluded to, I have paid much attention to this subject, and every thing I have seen confirms me in the belief that my opinion is correct. It will be sufficient for me to say, that I have examined my notes relative to thirty-one patients, who were tuberculous, as proved by autopsy, or by the diagnosis of Louis, and whose histories I have more or less in detail, these being all in which I have noted this expiratory sound ; and this prolonged expiration, in a part proved to be diseased by other signs, has been found in every one of them. I will add in relation to ten or twelve other patients, who are not very evidently tuberculous, perhaps because the disease is not sufficiently advanced, this phenomenon, (*i. e.* prolonged expiration,) accompanied by others very slight and delicate, exists under one of the clavicles ; and exists even in a degree

more marked, than in some of the thirty-one patients already spoken of, in whom we found small, semi-transparent, gray granulations, more or less agglomerated together. This sign I have also remarked in pneumonia, before hepatization was sufficiently advanced to produce bronchial inspiration; so also in dilatation of the bronchia, the existence of which has been proved by autopsy. Finally, let me state what appears to me to be the value of this sign, what it appears to indicate, and what appears to constitute its importance. First, when the pulmonary tissue begins to grow solid, from infiltration of matter into its substance, one of the first alterations of the respiratory murmur is a prolongation of the expiratory sound, and, at the same time, this begins to be bronchial, even before the inspiration becomes in the least so. This fact once proved, it seems to me possible to give a simple explanation of it, and one which agrees with facts.

What is there in hepatization, and in advanced hardening from tubercles, which makes the respiration bronchial? I think no one will doubt that it is owing to a solidification of the parts adjacent to the bronchia; but air passing through bronchia that are healthy, as well as those that are diseased, ought to produce vibrations. Why are not these vibrations always transmitted to our ear? Simply because the pulmonary tissue intervening is too soft*, too spongy, too light, to transmit freely these vibrations.

But after a tuberculous or inflammatory action, a more solid matter is deposited in the substance, and, consequently, it is reasonable to expect that those vibrations, caused by the passage of air, should be transmitted to the ear; and hence it

*The healthy vesicles of the lungs will not transmit the sound from the bronchia, while the condensed substance, under disease, will do it. See Williams on diseases of the lungs, &c. See also letter of March 20th — 24th, 1832, page 129 of this work.

only remains for us to explain, why these vibrations are transmitted in expiration, in a less advanced stage of disease, than they are in inspiration.

This appears to me very explicable; for at the beginning of disease, on the deposition of solid matter, when there is already sufficient to transmit the vibrations produced in the bronchia, there are still many vesicles entirely free, the expansion of which causes a certain quantity of sound at each inspiration. But when do these vesicles dilate; when do they make this noise? Precisely at the moment when the air is traversing the bronchia in inspiration; so that the sound produced by this passage of air, and which ought to be transmitted to the ear by means of the solid matter recently deposited, is destroyed by the greater sound of the expansion of the vesicles. On the other hand, in expiration, this bronchial sound continues while there is no vesicular expansion to destroy it by its superior force; consequently we hear it.

This explanation is confirmed by the fact, which I have often remarked, namely, that in emphysematous patients, the expiratory sound is nearly nothing; at least, if there be not in some part of the lungs bronchia more or less dilated.

But, still, it may be asked, of what use is this phenomenon, as we have others which indicate the same state of parts? First, it is useful as a new sign to add to others. Again, it exists; and that is sufficient for us, who study every thing that exists, and not that which we think beforehand will be useful. Further, this phenomenon is, perhaps, more marked, more capable of being exactly measured, than others which we have in similar cases. Finally, there is a difficulty in auscultation, which every one who has seriously attended to this subject must have felt; viz. a difficulty, at times, of distinguishing a vesicular respiration from a bronchial one. For

myself, I well know I have made many mistakes upon this point, and I have seen others make them also, especially among children. Now I know of no phenomenon which can aid us in this distinction, so much as the study of the expiration ; for in all cases, with some very rare exceptions, I have found a prolonged expiration, where the respiration was evidently bronchial ; and, in fact, my attention, very often, has been fixed upon this respiration, by the fact of the existence of a prolonged expiration, which first struck my ear ; in a doubtful case of this sort, therefore, I should be decided by the character of the expiration.

Remarks by Henry I. Bowditch, M. D. — We may remark that the whole of these observations are very interesting, as the reporter has pointed out to the Society. (We well remember the discussion which took place at the meeting of the Société Medicale d' Observation, when these notes were read.) No one, so far as we know, has shown so well the differences between pneumonia in healthy persons and in tuberculous ones. But we wish to refer to the prominent topic treated of in the reporter's notes, viz. the prolonged expiration. He was much interested on this point, for many months previous to making known his researches to the society, and when he did so, it was thought too important to be passed over, and caused a very animated discussion.

There was one circumstance which the reporter mentioned, which all were inclined to dispute, viz. that in healthy respiration there is no expiration at all, or, at least, it is very slight, and not more marked in one lung, than in the corresponding part of the other. Consequently, if the assertion of the reporter was true, if any one in ausculting a patient, who had presented some of the symptoms difficult to explain, except

on the supposition of grave disease, should discover a *prolonged expiration* under either clavicle, or at the top of the shoulder behind, he might be led to anticipate tuberculous disease in that part. Many were very sanguine that Jackson had made one of the most important discoveries in auscultation since the time of Laennec; a discovery which would teach us the spot where tubercles were just beginning to develope themselves, and before they could be, by common observers, recognized. But every one could decide whether there existed a lengthened expiration, when he could not tell whether it was bronchial or not. Louis was a long while in coinciding with Jackson, but eventually he was led to think favorably of the sign, and many a time, during the winter succeeding that at which Jackson first made known the point in question, did his master mention, in my presence, this sign, as very important, and gave the credit of it to Jackson. But there are still some who doubt, and I think the subject is still "*sub judice*," and I allude to it in order to draw the attention of practitioners to the necessity of analyzing the respiration more thoroughly than we do. A question has lately been raised in relation to this interesting subject, of this nature, viz., whether there be not often a prolonged expiration at the top of the *right* shoulder, and none at the left, and this without any disease? I do not know that this has been *proved*, and there is a great difference between *opinion* and *proof*. At any rate, the subject is too important not to excite every one who desires our knowledge of the early stages of phthisis to be advanced; for it is in these early stages that we must hope to be able to do something towards preventing its rapid progress.

I shall make but one more remark, viz. one in relation to the tumor of the spleen, observed at the first examination of the first patient; was it the remains of his intermittent, which

he suffered from, at the age of eleven years? We cannot decide in this case, because no report is made in relation to it after the first visit.

CASE XXI.

PNEUMONITIS AND PLEURITIS.

Hospital la Pitié. Ward St. Paul, 13.

Under the care of M. Louis.

June 17, 1833. — G. J., æt. 31, shoemaker, from the age of 15; hair black; eyes and complexion deep brown; flesh in sufficient quantity; five and a half feet tall. This man was born in the department of La Meuse. His father was killed in battle, æt. 34, and patient knows nothing of his previous health; his mother died, æt. 47, after a disease which lasted one month; she was never asthmatic, nor palsied; two of his brothers are living, æt. 33 and 38, and are well; one other died when a few months old; one sister died, æt. 17.

This patient was nursed by his mother; his health has generally been pretty good; he has never had any grave disease, except the small-pox, when two and a half years old; since then has never kept his bed for illness; did not have short breath during childhood; could run as easily as his companions; but has been often subject to colds, with a slight hoarseness, lasting about fifteen days, yet not such as to oblige him to quit his usual occupations; he has never had hæmoptysis nor hæmatemesis, and never dejections nor urine that were bloody. He had epistaxis and frequent attacks of hemicrania until the age of 15, sometimes accompanied by vomiting; none of either since 15. Had gonorrhea at age of 24, for six weeks; has been at Paris since four years of age; he has

no children; during the last two months he has worked at Longjumeau, four and a half leagues from Paris.

Present disease, which he dates from the 9th, was preceded during three days, by coryza, without any other symptom.

On the evening of the 9th, after having drank two bottles of bad wine, without, however, being intoxicated, he was suddenly seized by a severe chill, causing him to tremble. This continued more or less during the night, together with thirst, and a little cough, and with white expectoration; no pain in any part, but sleep disturbed. On morning of the 10th, on rising from bed, severe pain in head came on, together with a stitch in the right side of chest, so acute as to cause tears; cough increased; expectoration still white, and it continued so until toward evening, when it became rusty, and has been so ever since; also oppression and anorexia. During the night of 10th and on 11th, dizziness, and all the above-mentioned symptoms, and they have continued until present time. The stitch in the side has abated a little this morning, but not before; sleep bad; frequent dreams; no delirium; no epistaxis; no buzzing in ears; never nausea, nor vomiting, nor sore throat, nor dysphagia, except from oppression at chest; never pains in bowels; dejections only from enemata; has not eaten anything, and has constantly been in bed since the 10th. On that day had ten leeches applied to the right side of chest; venesection and blister on 15th, without the least relief to any symptom, except to the headache.

He rode to Paris this morning from the country, and has felt better since his arrival; pain in head and side, and the oppression having lessened; expectoration less copious and much easier. He has walked this morning from the palace of the Luxembourg to the Pavilion, and thence to this place, (about one and a quarter miles.) During this walk, he

felt once a transient pain in left side, near lower margin of the ribs.

Now, four, P. M. — Face tolerably natural; intelligence and memory good; slight cephalalgia; no dilatation of alæ nasi; tongue a little thickened, covered with a light, white coat, sufficiently moist; mouth pasty, but not bitter; thirst; anorexy; no dysphagia; no nausea; abdomen soft, not painful even under pressure; one dejection liquid, without enema, and without pain, this morning; voice good, strong; but respiration quickened while conversing; cough frequent; expectoration sufficiently copious, and more easy than heretofore, partly white, partly rusty, containing very small bubbles of air, and semi-transparent, slightly viscid; resp. 28 after this examination; pain in right side of chest when raising himself in bed, and during cough, from mamma down to cartilages of lower ribs; strength moderate; not prostrated. On percussion the chest resounds very well throughout, both before and behind, except on the right, in the two lower thirds behind, where it is very obscure, although not flat; vesicular expansion, without expiration, except in the above-mentioned space, and extending as far on the side as a vertical line let fall from the axilla; here, (*i. e.* from this line to the vertebræ) is heard a very minute crepitous râle, mingled at times with the subcrepitous and mucous; no resonance of voice except in this part; the sound of the heart is heard, not very loud, the two sounds distinct; p. 108, skin very hot and dry.

June 18. — Very little sleep; still slight pain in sides, right and left; none during cough; one dejection this morning; urine red; p. 90, regular, hard, rather small; great heat of skin; little sweat in night. Resp. 28, rather high; tremor, when the hand is applied to chest, is felt rather more at right side in front, than at left; respiration less free, and

percussion less clear in former; on percussion, the right is nearly flat from mamma to liver, and in this space are heard a little sub-crepitous râle, bronchial inspiration, and expiration, and bronchophony.

(Venesection, ℥ xvi.)

Five, P. M. — A little relieved since bleeding; but feels weaker, and appears more emaciated; p. 104, small, hard; great heat; no vomiting; no dejections; expectoration more viscid, otherwise the same; blood taken this morning has a pretty firm, yellow, and thin buff, with very little serum. Less crepitous râle behind at right; bronchial respiration and bronchophony well marked, especially at middle third; a little bronchial respiration in a limited spot below, and a little outside of right mamma.

June 19. — Sleep good; night better than any since first attack; no sweat; feels better now; expectoration as yesterday. Resp. 24; p. 84, after sitting up in bed. Crepitous râle begins immediately below the spine of the right scapula, and two inches lower the respiration becomes bronchial, mingled with a fine crepitous, and, at lowest part, with sub-crepitous and sonorous râle. In front at right, the respiration is less bronchial than yesterday below mamma. Sound on percussion more clear, especially below mamma; but on the back, complete flatness in the inferior third, and sound very dull in middle third.

(Syrup of violet flowers with oxymel. Gum potion. Enema of flaxseed tea. Strict diet.)

Five, P. M. — q. 84, hard, full; skin as before; tongue as usual; expectoration less viscid; no dejection; complains much of the parts about the spot where venesection was performed; they are swollen, and very tender to pressure, causing pain to shoot up and down from the opening of vein; no

hard cords felt in course of vein. Complained, not long since, of a pain that had seized him below left mamma, but it ceased almost immediately. The respiration and results of percussion are natural throughout left part of chest, front and back; at right, same as this morning, except crepitous and sub-crepitous râle below and outside of mamma.

From this time until the 22d, the symptoms were as follows: — all the results of auscultation and percussion were nearly the same, except that the marks of hepatization of the lung, viz. bronchial respiration, bronchophony, and flatness on percussion were more extended, and on 21st, the two lower thirds of right side of chest gave scarcely any sound on percussion. Pain in right side of chest very severe, preventing cough and easy respiration on 21st, P. M. No pain in left. The resp. was 22 on the morning of 20th; it was 36 and "higher" at five, P. M., of same day; the next morning it was 42; expectoration same as before, but viscid, less transparent; on 20th, patient said he could lie, for the first time, on either side. The pulse on 20th, 84; at five, P. M., 100; on 21st, 84; at five, P. M. 108, hard. Chill, with trembling of body on 20th, A. M. and P. M. Heat of skin generally as before; no sweat; thirst intense. One dejection on 20th, six on 21st, and two vomitings after three grains of antimony. Arm a little more swollen. Emaciation more marked. On 21st, the following prescription.

(Antispasmodic potion with grs. vi, tart. ant. and syrup of white poppies ℥ i.)

June 22. — No sleep on account of pain in right side. Now much dyspnœa, pain severe in the inferior and lateral parts of right thorax; is much fatigued by it and it prevents easy cough. Expectoration slightly rusty and very viscid. Resp. 28; p. 98; heat purgent; more than twenty dejections; no nausea at

present. Bronchial respiration and bronchophony very indistinct; no evident crepitous râle; in lower half right back very little sound of any kind by auscultation; otherwise chest the same behind. In front percussion more sonorous at right than left, and intercostal spaces are more marked at right. There is a little tumor on left forearm, over which the skin is pale.

(Same prescription of antimony. Syrup of violet flowers with oxymel. Eight leeches to right side.)

Five, P. M. — Complains much of side. P. 120; resp. 40; no relief since leeches; no expectoration; cannot cough; speech obstructed; thirst not so intense; has just taken a little beef tea; no dejection; skin very hot; more depression of strength; great vibration produced on hands placed on right breast.

From this day until the day of death, the 27th, the symptoms were as follows: — The respiration at right, behind, was always bronchial, save one day when none was heard and no râle; which last usually was heard on back and below mamma in front; not a fine crepitous but large and unequal cracklings. Bronchophony and flatness on percussion continued behind. On the 23d there was an expiration below the right clavicle, and the vesicular expansion was less strong than below left. On this same day the respiration below mamma was purer than it had been previously. On 25th there were heard loud cracklings, and an expiration in this latter spot. Expectoration, varying slightly from day to day, was always more or less viscid, yellow or red, and contained air; the viscidity increased toward end of life; respiration varied from 36 to 54, but generally was 40 or 44; pain in right side noticed until 26th, though diminished much on 24th; oppression at chest on 23d. The pulse at the first three reports was at 116, the last three at 120; at the one intervening it was 108, hard; skin always

hot; no sweat except once a little about the head. Sleep, none on 23d and 24th; delirium with great drowsiness, even so as to fall asleep during examination, on 26th and 27th; tongue dry, slightly coated; dejections seldom, sometimes none at all until 26th, when he had six with colic; and on 27th, four. Tumor on left arm diminished on 23d; complained of pain in legs on 24th, but no swelling, nor redness of them was discerned. Emaciation and diminution of strength daily; on the 23d, it was reported that patient did not take the antimony ordered the day previous. A Burgundy pitch plaster to chest, and same prescription was ordered, substituting for the antimony, syrup of gum. No other prescription is mentioned in the original notes, except that on 25th, three grains of antimony were ordered.

On 27th, one, P. M., death took place without agony, delirium having preceded it.

Autopsy. June 29th, at eight, A. M., forty-three hours after death.

Exterior. No stiffness of limbs, abdominal parietes of a greenish hue; veins easily traced throughout surface by their livid color; left side of chest anteriorly seems larger than right; intercostal spaces less marked in former; flatness over præcordial region more extended than usual. No œdema of lower extremities; veins of left arm entirely natural; no swelling at elbow. Fat about one line in thickness upon the chest; a small abscess in abdominal parietes at right side, near edge of ribs; muscles generally firm and of a good color.

Abdomen. — *Stomach* distended with gas, is a little larger than usual; has no viscid mucus and very little liquid in it. The internal surface is nearly throughout of a livid brown, or red color, except near pylorus where it is pale; the reddened part occupies the two thirds of the small curvature nearest the

cardia and one and a half inches on each side; the mucous membrane here is raised, and much infiltrated with a reddish serous fluid. In the great cul-de-sac and upon the two faces, through nearly half the organ, the brownish color is interrupted here and there by spaces of a half inch to an inch in diameter, and in these spots the color is white, but the mucous membrane is entirely destroyed. In the other parts, of the extent above marked out, the membrane is very thin and soft, like mucus in some parts, giving strips of only one or two lines in some others. Toward the pylorus, in the great curvature and the adjoining parts of the two faces, the membrane yields strips from seven to nine lines; upon the small curvature the tissue is so infiltrated that no strips can be raised.

Small intestines, common size, contain a little yellowish-green liquid, with more or less of mucus; internal surface of a pale-white mixed with a yellow, green, brown or red; these colors being equally seen in every part; only the last third is quite pale; Brunner's glands were to be seen, small and pale, in the last three feet. The mucous membrane gives strips with much difficulty, but in certain spots some are from two to four lines long; in others the membrane is thin and of a brownish color, very similar to the cardiac half of the stomach; these spots are rare, and generally the membrane has its usual thickness.

Mesenteric glands, of a pale rose, or gray color, small.

Large intestines, ordinary size; contain a little yellow, clear liquid, without any moulded fecal matter; internal surface, pale-white throughout, except in a small spot in transverse colon; strips everywhere from ten to twelve lines; thickness of membrane natural; Brunner's glands pale and small.

Liver large, pale, adherent by a small cellular band, of an inch long, to the anterior walls of abdomen; contains the usual

quantity of blood; soft, easily penetrated by finger; the two substances distinct; the white the most abundant.

Gall-bladder small; has a moderate quantity of clear, yellowish-green bile; its mucous membrane natural.

Spleen very large; six inches by three and a half; very soft; almost diffluent; has the color of wine-dregs.

Kidneys large; easily torn; red; membrane easily raised from their surfaces, which are smooth.

Urinary bladder rather small; mucous membrane slightly injected, giving strips from fifteen to eighteen lines long.

Neck. — *Pharynx* and *œsophagus* well and covered with their epithelium everywhere. *Larynx* and *trachea* a little red, without swelling, or false membrane. Mucous membrane of trachea thin, giving strips of fifteen lines.

Chest. — Between the sternum and *mediastinum*, or rather in the superficial tissue of this latter, which is red, deeply injected and infiltrated, are seen some small collections of pus. The two lungs adhere to the pericardium by the lower part of their anterior edges.

Right lung adherent laterally, and a little on its front and to diaphragm, by means of false membranes, which are thin and easily torn. On this side, the thorax contains fifteen or sixteen ounces of a sero-purulent liquid; costal pleura thickened and extremely red and injected; much more than in ordinary cases of pleurisy. This lung is rather large; moderately heavy; superior lobe and anterior face crepitate and are pale; lower lobe with part of middle, and especially posteriorly, red, not crepitating, and compact, although flaccid throughout. The pale and crepitating portion contains much air and little liquid; the other parts contain much reddish serous fluid, and very little air, and in these the cut surfaces are not manifestly granulated, but the organ in these parts is easily penetrated by the finger, and sinks

to the bottom of water. Bronchial tubes red, as the trachea; those of lower lobes appear a little enlarged, but they contain very little liquid; and everywhere they are thin, transparent and smooth. Vesicles of lungs no where dilated.

Left lung, free from adhesions nearly everywhere; less large, less heavy than the other; pale and crepitating; contains very little fluid anywhere; bronchia like those of right, red, but smooth, thin, &c.; no dilatation of vesicles; at the surface of this lung are three masses about the size of small nuts, firm, hard, compact. Two of these masses are in the upper lobe, one or two inches from the apex; on the surface of these two there are cicatrices, *i. e.* there are small depressions radiating from the masses as a centre, producing a puckered appearance of the lung; the third, which is situated at the summit and upon the border of the lower lobe, is covered on both sides by a cartilaginous tissue, with a smooth surface, nearly a line thick; all three are composed of a cretaceous substance, which is contained in a cyst, rather thin, and cartilaginous, surrounded by a hardened, dark matter. I traced one of the bronchial tubes to one of these masses, where it terminated suddenly in a cul-de-sac, having, even to its extremity, its natural thickness and transparency.

Pericardium, much distended, contains twelve or fifteen ounces of a semi-opake, reddish-brown liquid, not clear; and containing numerous little flocculi. Surface of the pericardium is smooth and pale, or slightly injected, and has no false membranes upon it. Upon the surface of the heart are here and there some very small, and very thin false membranes, which float a little upon the water; also some white spots, from which no false membrane could be detached.

Head. — *Arachnoid*, a little infiltrated underneath, posteriorly, by a clear serous fluid; *pia mater* slightly injected;

easily detached from the substance of brain. *Gray substance* of brain not more injected than usual; *white substance* has a few red dots, though not a great quantity, and is of good consistence everywhere. *Lateral ventricles* contain two or three ounces of a clear serous fluid; *central parts*, septum lucidum, &c., of a good consistence. *Corpora striata*, annular protuberance, medulla oblongata, cerebellum, all well as to color, form and consistence.

By the Editor.—The rational symptoms of inflammation in the lungs and pleurisy were distinctly marked in this case, within the first twenty-four hours of severe disease, which began on the evening of the 9th of June. We have, however, a new instance of the maintenance of the muscular strength for many days, since the patient on the 17th, after a ride from the country, was able to walk more than a mile to the hospital. The pain determined the seat of the pleurisy, at least, to be in the right side. The physical signs fully confirmed, what was otherwise probable, that the pneumony was on the same side, and showed that it was there limited to the lower two thirds of the lung and its posterior half. On the following morning the percussion and auscultation discovered that the disease in the lung had extended to the front, except at the upper part; and, at evening, that a large part of the lung was passing into the state of hepatization. Next day, the 19th, the disease seemed rather mitigated in the morning, but at afternoon there was a pain about the region of the heart, which was transient. This was noted, but would seem to have been lost sight of afterwards. It was, no doubt, at this moment that the pericarditis supervened, which was discovered after death, and probably contributed much to the fatal issue of the case. There were chills on the 20th; and

on the 22d the percussion was less sonorous in front, at the left than at the right, and the intercostal spaces were less marked at the former than at the latter. Here we have signs of pericarditis. In confirmation it was only necessary that the respiration should have been found deficient in a large space around the region of the heart, in correspondence with the physical signs last mentioned, while the rest of the left thorax should have exhibited all the phenomena of health and soundness. That this last was true, the notes give sufficient assurance, but the neglect to state the respiratory phenomena in the left breast seems to show that the question, as to pericarditis, was not brought into view. Such an oversight is committed every day, but is more remarkable in M. Louis than in any other man, as will be acknowledged by those who are conversant with his writings, and his accuracy in studying individual cases. It is also remarkable in the reporter, who was peculiarly alive to every sign of this very disease, pericarditis; and who was, very early, in his studies under M. Louis, greatly delighted by the discovery of its true signs. It may, however, be true that the only oversight was in not writing down the observations actually made on this subject; and so far as regards M. Louis, it would be unjust to admit any other conclusion. We at least may learn from this case, what many others accurately observed will confirm, that a chill in an advanced stage of an acute disease, should always lead us to look for some new, secondary affection; and that a pain about the region of the heart, although transient, should direct our inquiries to both the rational and physical signs of disease in that organ, or its envelope. I shall abstain from other remarks, which the accompanying circumstances might authorize, willing to fix the attention on what has been already stated on this point.

The state of the right lung and its pleura was found, after

death, to be in accordance with the physical signs during life. The precise influence of the effusion in the cavity of the pleura, and of the disease of the lung, respectively, in producing those signs, may not perhaps be accurately determined. The state of the lung was undoubtedly modified by the pressure of the fluid around it. I presume that the lung had a wrinkled aspect, and seemed as if somewhat shrivelled; such at least is the appearance I have noted in analogous cases, and the description, at least, does not contradict this presumption. The flatness over the region of the heart, when the dead body was percussed, is an accordance with the effusion into the pericardium.

The disease in the anterior mediastinum could not, under the circumstances, have been easily recognized during life; nor do I know that any certain signs will enable us, in any case, to discover an inflammation in this part. In some instances, indeed, the evidence may be sufficiently obvious of such an affection, when it exists alone.

Must we not regard the cretaceous deposits in the left lung, as equivalent to tubercles, as being in fact the result of tubercles in those spots, and therefore as throwing light on the patient's constitution?

The disease in the mucous membrane of the stomach, if it was disease and not a cadaveric change, was not indicated by any signs during life. It might be the subject of much discussion. But I prefer to leave all that to those, who have studied, and who are now studying this dark subject, not doubting that a few more years will elucidate the questions, which relate to it. My young friend, Dr. Bowditch, has made some useful observations in regard to it, and I hope he will prosecute his inquiries still farther, and give the result to the public.

CASE XXII.

PNEUMONITIS AND PLEURITIS.

Hospital la Pitié. Ward St. Paul, 13.

Under the care of M. Louis.

Feb. 11, 1833. — H. J., æt. 36, limbs and chest well developed; middle stature; mason; born at Passy, but has lived at Paris since age of 23. Father, æt. 72, living and well, so far as he knows; has rarely seen him, and not once for last seventeen years. Mother, æt. 68, alive and well three years ago. One brother died, æt. 3 months; two sisters alive, æt. 35, and 21, he believes both to be well. During infancy he was strong, robust, not prone to be short-breathed; but for twenty years has been frequently affected with colds in winter, lasting three or four weeks. At 8 years of age, had variola; at 9, measles; and at 17, a severe fever at Reunes, during a fatal epidemic, by which all his family were attacked; in that fever his skin was red, he had soreness of throat, and desquamation of the cuticle afterwards; also had vomiting and diarrhœa, and was abed fifteen days; does not think he was so ill as now. At Lyons, æt. 26, had intermittent fever, (quotidian,) for fifteen months; most of the time was in hospital; was several times cured with quinine, and had relapses when at work again. Came to Paris during this, and has remained here since, in the same profession. At age of 29, had gonorrhea and buboes. Since at Paris, has had no other disease except as follows, first, jaundice, which began Jan. 1, 1830, and ceased in autumn of 1832, — was at Hotel Dieu, seventeen days for it, but afterward worked and ate as usual, without emaciation; in this disease his bowels were regular; dejections yellow, and his face was the only part of body that was colored; mouth tasted badly. Second, at end of August 1832, having worked at the Thuilleries, was exposed to cold

wind, and had severe chill, followed by heat; kept abed all next day, and a day afterwards had pain in left side and cough, with white, clear expectoration. After three or four days got to work again, but had great dyspnœa and cough, which lasted until the last month. At first could not walk without being almost suffocated, and having pain in side; sputa at last became thicker; decubitus easy, both sides; five or six first weeks appetite entirely gone; had emaciation and thirst; no coryza at any time; slight febrile symptoms at evening; had no treatment; always worked after first few days though feeble. This disease was more severe and lasted longer than any of his previous diseases. Had been well about fifteen days, when present disease began; cough had ceased; flesh and strength returned. Has generally led a regular life, though at times he drinks freely.

Present disease, by report of his wife and himself, commenced thus. Feb. 9th, was first taken, after having worked harder than usual during the six previous days, in which, however, he had enjoyed daily twelve hours of rest. During 9th, he worked as usual, had some thirst, but appetite was good and dined heartily at seven, P. M. At ten, P. M., had chill and took a pint of wine to overcome it. On 10th, fever, redness of integuments, delirium, headache during whole day, also cough with two or three bloody sputa; took foot-bath. On 11th, headache and delirium continued, and he had pain also in left side of chest and more bloody sputa; had fifteen leeches to anus. He then entered here, being brought in a litter. Has not had diarrhœa, nor vomiting, has had little or no sleep.

Now, five, P. M. — P. 115, hard; skin hot and very moist; face flushed, with a little yellowish tinge; tongue dry, lobulated, brown at centre, white at edges; deglutition a little painful, some pain in throat; heat from thyroid cartilage to

sternum ; thirst, desires warm drinks ; no pain in belly, except a little at epigastrium ; no nausea, nor vomiting ; no dejection to-day ; has cough, pain in left side of chest ; several rusty colored, semi-transparent, viscid sputa, containing small bubbles of air. Resp. 44, abdominal ; headache ; tinnitus aurium ; dizziness when sitting up in bed ; pain in loins and legs. On auscultation, on the back respiration good at right, and also at left, in upper part ; at beginning of the middle third of left back, bronchial inspiration and expiration with resonance of voice, — ægophony ; a little crepitous râle around this part ; respiration coarse down to edge of ribs ; no expiration elsewhere ; some crepitous râle, and respiration very feeble on left lateral portion of chest. Percussion more sonorous at left, than at right in front and especially at side ; whereas, the respiration on right, at the side, is much louder and freer than on left. Percussion behind at left is flat, and very slightly sonorous at right.

(Venesection ʒx. Tartarized antimony.)

Feb. 12. — The blood has a thin and soft buff. P. 120, rather full, regular, resisting : resp. 36, not very high ; speech rather short ; sputa not very abundant, hardly covering bottom of spit cup, all containing very small bubbles of air, semi-transparent, some whitish, but most of apricot color, moderately viscid ; less oppression at chest than last night ; face less red ; good sleep in night ; a little tendency to sleep now ; does not remember having seen us yesterday ; tongue dry, cracked ; no dejection ; less pain in side than last night ; pain in head and limbs ; but feels better than yesterday. Has taken six grains of antimony without nausea, or vomiting. Anteriorly, chest much more sonorous at right than left, from clavicle to mamma ; behind, percussion sonorous at right ; in the two

lower thirds of the left back, percussion less good, growing flatter from the upper part to the base, three inches from which there is perfect flatness. Respiration good at right back; at left, in upper third behind, respiration very confused, distinguished with difficulty, but without evident râle; below this, inspiration and expiration bronchial, of which the maximum of intensity is at the middle; and at intervals there is a slight sub-crepitous râle and gurgling, after, or during cough. There is bronchophony, not œgophony, where bronchial respiration is heard. In front respiration is good, nearly equal in the two breasts; it is very clear upon sides, especially at left.

(Syrup of violet flowers. Gum potion. Venesection ʒ xx. Aromatic potion with tart. ant. grs. viii, conditionally, at four, P. M., with syrup of white poppies, ʒ i. Liquid farinaceous diet.)

Four, P. M. — P. 110; resp. 36; respiration becoming bronchial below left clavicle; expiration there now, which was not there last evening.

Feb. 13. — P. 108; resp. 34 to 38, with heat of skin; sputa less colored; face somewhat yellow; features a little pinched; a small dejection in bed. In front, on percussion, more sonorous at right than at left; respiration pure at right, coarse at left. Behind, at left, percussion everywhere less sonorous than at right, and flatter below scapula than yesterday; bronchial respiration at left through whole of back, save the three upper inches, with gurgling and sub-crepitous râle; broncophony, to a line let fall from axilla; respiration at top less clear than at right. Clot of blood, drawn yesterday, easily broken, covered with a greenish buff. A little nausea in night, and has taken three quarters of the antimony.

(Oxymel. Antimony grs. x. Two blisters to thighs, if great weakness towards night.)

Five, P. M. — Very feeble; countenance more yellow; inclined to sleep; skin hot; p. 108, small, hard; resp. 30; no vomiting, nor dejection. On the left back, auscultation as this morning, with a slight crackling near its summit; bronchial expiration throughout left back, and also below left clavicle, though not quite so distinct as last evening. Below right clavicle, in a limited spot, an expiration is heard from time to time; none anywhere else in right thorax; resonance of voice below same clavicle at the same limited spot.

Feb. 14. — P. 104; resp. 30; attitude of great depression of strength; sputa more viscid, more red colored than yesterday; tongue dry, cracked; speech as before; thirst; no nausea, nor dejection; percussion equally sonorous below clavicles, but not very sonorous below either; no difference in respiration below them, but perhaps coarse below both. Behind, auscultation and percussion gave less morbid results than before; respiration pure in left axilla.

(Antimony grs. xii. Two blisters in front of chest.)

From this time until the day of his leaving the hospital, March 14th, there was, generally speaking, a gradual amendment, as will be seen by the following concise account of symptoms, which are given in great detail in the original notes, till Feb. 20th, though afterwards the principal symptoms alone are spoken of.

Head. — His mind was not very clear until the afternoon of 16th; he was inclined to sleep, even when examined. After 16th, his appearance was always calm, mind clear, and he was less inclined to sleep; never any complaint of pain in head; face had a yellow tinge during some days, afterwards was red.

Alimentary Canal. — Tongue was always mamelonated. It was yellow at centre until 19th, afterward whitish until 24th,

when it is described as more natural. It was rather dry until this time. On 15th, patient complained of having had a sore throat during three days, and that it had been increasing; but on that day nothing could be discerned in pharynx and parts adjacent, which were all moist. This soreness of throat was complained of until 18th; it was accompanied by difficulty in swallowing, causing cough and suffocation on first attempting to drink; also pain along larynx, when taking short breath. The pharynx was always well in appearance, excepting on 16th, when it was a little redder than natural; but the uvula was very red, without being swollen, and on its surface had two or three little white specks; these continued, with very slight changes until 21st, after which no report is made of them. This trouble in throat was during two or three days, 16th to 19th, the principal complaint from the patient, and the voice was altered. He had vomiting in slight quantity on 15th, but otherwise alimentary canal was always as previously reported. No pain in abdomen.

Chest. — Cough never very troublesome, never any complaint of pain in chest. Expectoration, from being red and viscid, became, on 16th, of a brown color, and less viscid, and on 18th, it was a clear liquid, surmounted by a frothy fluid, like beaten saliva, without any color; on 19th, yellow, opake mucus, not adhesive, not containing air; 20th, green, opake; and from this time it continued more or less opake, and varied in color from yellow to green, and sometimes white, never viscid. Respiration was at 36, at five, P. M., on 15th; diminished gradually, and on 20th, was at 28. It was usually diminished in the morning, but was always accelerated in the afternoon. The results of auscultation and percussion corresponded with the general symptoms. In front, the respiration at left clavicle was always less than below right; it was more

superficial below the latter. Nothing is said of the front afterward, until March 14th, when percussion is recorded as being sonorous below left clavicle, but respiration still a little stronger at right. Behind, at right, auscultation and percussion always good. On 15th, at left, bronchial respiration more extended, mingled with sub-crepitous râle after cough, and flatness as high as lower angle of scapula; no broncophony at top, but respiration a little coarse there. On 16th, percussion good, and respiration also below left axilla; sub-crepitous râle, almost gurgling, in lower third of back; bronchial respiration, also, through whole of left back. On 17th, decided change for the better. Nowhere flat on left back; respiration feebler than at right, but not bronchial, except when coughing. Such continued to be the signs throughout the remainder of his stay in the hospital; only there was a diminution, which was slow, but always progressive, of each one of them. On 21st, percussion very clear in middle third of left part of back; obscure below; and, in this latter part, some crepitous râle, with bronchial respiration and broncophony. Finally, at the last reports on 14th March, the day of departure, there was coarseness of respiration, but not bronchial, on left back; slight resonance but not perfect broncophony in same part.

On 27th February, was remarked a diminution in the prominence of left side of thorax, both laterally and posteriorly; left mamma lower than right; but patient said he had observed the same thing for many years past. The pulse, like the respiration, diminished very rapidly, viz., to 72 and 64; the skin was sometimes hot, and on Feb. 20th reported as sweating, for the first time, during the previous night. The strength and flesh increased meanwhile; on 21st, he began to take vermicelli; on 23d, egg and bread, and, before he left, he took three quarters of a loaf of bread a day, with two cups of wine.

Treatment was as follows : — Antimony was omitted on 15th, and oxymel of squills substituted ; and this, with the rest of the previous prescription, was continued until 18th, after which no record is made of medicine, (as patient had become convalescent,) except on 22d, when four grains of Dover's powder and four grains of digitalis were prescribed.

Remarks by Editor. — In regard to this patient we notice ; 1st. That his frame was strong, and no doubt his constitution was so originally, and that he was in the vigor of manhood. 2d. His health had suffered from repeated and protracted diseases, previous to the one here recorded. 3d. After a short interval of health, he was attacked in a very formal manner, with constitutional symptoms, indicative of grave, local disease. 4th. On the following day, the signs of the local disease, cough and bloody sputa first appeared, and on the third day, pain in left side was added. 5th. The first examination for physical signs was made on the forty-sixth hour from the attack of the disease. Then it was found that hepatization was already effected in the middle of the left lung, on its back part. 6th. At the first exploration of the chest, we find signs of emphysema of the left lung in front, and especially on the side ; though subsequently some doubt was thrown on this matter. 7th. In the fourth and fifth days, we find the disease abated in violence, as manifested by rational signs ; but the physical signs show that the local affection was extending its limits, and had reached the front part of the upper left lobe. 8th. On the fifth day there is first noticed an expiration, with resonance of voice in a limited spot below the right clavicle. Before that time no physical sign of disease in this region had been noted ; and this observation appears to have been made by the reporter. On the following day, the reporter expresses a doubt

(for himself) whether the respiration be not rather coarse, and whether the percussion be sufficiently sonorous below the two clavicles. These observations may, perhaps, be regarded as some evidence, that the patient was tuberculous, and then we can understand the protracted cough, &c., through the autumn and first half of the winter. On the other hand, if this be a just view, the convalescence of the patient under the acute disease, was more perfect and more rapid than would usually happen in cases apparently similar. 9th. From the seventh day there was a regular amendment, as regarded the disease in the lungs, so that on the ninth day, there was a great abatement manifested in the physical signs. By a note in brackets introduced in the original notes, the reporter seems to have attributed much relief to the venesection, which on the 12th Feb. especially, was comparatively copious. There was, however, an interruption in the patient's convalescence by a new disease in the throat, which began about the fifth, and was his most annoying complaint from the eighth to the eleventh day. 10th. If the evidence of the existence of tubercles in this case be regarded as satisfactory, the case is to be added to those mentioned in Case XX, as instances of recovery from pneumonitis in tuberculous subjects.

CASE XXIII.

GANGRENE OF THE LUNGS.

Hospital La Pitié. Ward St. Charles, 25.

Under the care of M. Louis.

Jan. 19, 1833. — H. H., æt. 34. This woman was born of healthy parents. Father died at 77, disease unknown, she says, old age; mother died at 44, in child-bed; neither of them

having been asthmatic, nor palsied ; — one brother æt. 50, and one sister æt. 40, both well. She has good health generally ; twelve years since, she was sick six weeks, in her bed eight days, having pain in left side, a little dyspnœa and cough, but not any fever, as she thinks. She has been in Paris four years, and every winter has had catarrhal cough, but never so as to keep abed. For two years she has been miserably poor ; never, or very rarely, getting any animal food ; but has been apt to drink too much wine. Has had five children, of whom three are living ; she was nursing one, six months old, when she entered the hospital. She was healthy until the injury to be described. Breath not habitually short.

She was injured January 1st, in an affray, at a time when she and her husband, by his account, were both intoxicated. The husband and another man were fighting ; she attempted to separate them, and was kicked in the abdomen and elsewhere, but not on the chest. She was knocked down, and suffered extremely ; lost her consciousness, and was brought to the hospital on the 2d, and placed under care of the surgeon. While under his care, she had pain low in the left side, and was cupped there with entire relief. A cough coming on, she was transferred to the physician's care on the 6th inst. From that time she has had cough and slight fever ; but nothing has been discovered by auscultation. To-day it was found that she had fetid sputa, and was more ill.

Now, prostration and the appearance of fatigue, which have been noticed in some measure, together with sighing, on preceding days ; no headache ; senses and memory good ; eyes natural, but complexion yellowish and pale since yesterday ; tongue soft, pale at edges ; great thirst ; dejections frequent, involuntary ; abdomen soft, supple and without pain, except that on the right, a tumor is felt ; this goes from the

edge of the ribs toward the flank, does not approach nearer than an inch and a half to the median line, and has its narrowest point below, for it seems to be triangular. P. 124, regular, rather small, not weak; breath very offensive, cough very frequent, though not so just now; expectoration of a dirty gray color, without air, extremely fetid, very liquid, and about half a pint; dyspnœa very manifest; speech interrupted, short and difficult; constant sighing and moaning, much exhausted, in despair; rises to her seat with extreme difficulty. On the back resounds well on percussion, and respiration good; the same below left clavicle; but below the right, respiration coarse, though percussion good. No sleep since entrance. She was bled once while under care of the surgeon, and twice since she was transferred.

(Rice water, sweetened. Gum water with ten grains of extract of cinchona, and one ounce of syrup of orange-peel. Chlorate water to be put on compresses of linen, from which she should be made to breathe frequently. Fumigations of chlorine.)

Three, P. M. — Asleep; resp. 30; p. 80. Tongue has a thick, light-brown coat on the lobes, white at edges, moist; no bad taste in mouth, except when sputa pass; these taste to her, or rather smell, like feces; deglutition easy; no vomiting since entrance; but nausea and retching from the fetid odour, which she first noticed on the 17th inst. Now, respiration not strong behind, and a slight râle on both sides of back.

Jan. 20. — P. 104, regular; cough the same; one dejection, not involuntary. On the back, at the left, a mixture of gargouillement and crepitous râle at lower part, but no resonance of voice; above, respiration good; something similar, but less marked at the right.

(Sulphate of quinine xii grains. Chlorate water as yesterday, and fumigations.)

Two, P. M. — P. 132; skin hot; face yellow and flushed; sputa as before; very feeble from her entrance into the hospital, never having walked since, but much more feeble now; anxiety, sighing. Respiration bronchial, or cavernous, with gargouillement very manifest in the middle, or a little below it, on the back, at the left.

Jan. 21. — Now lies on her back and says she cannot move; heretofore has lain on either side. No sleep; frequent, involuntary dejections through the night, which she does not perceive; tongue moist, blackish on lobes, not red at edges, nor thickly coated; no pain in throat, nor dysphagia; no nausea, nor vomiting, nor pain in bowels; feels no worse, but even a little better at stomach; urine sufficient and not passed without notice; p. 108, small and feeble; sputa less abundant, one ounce only, equally fetid as well as the breath, but less liquid, mostly of determined form; resp. 36; voice feeble, short; cough as frequent, but often dry; no headache; countenance less yellow and less prostrated; a little deaf, as she thinks. On the left back sonorous and whistling râles only, with a slight resonance of voice.

(Sulphate of quinine xv grains. Continue the other prescriptions.)

Five, P. M. — P. 106; skin not very hot; resp. 36; lying on right side; auscultation as this morning; on the left side expansion more free, pure, (without râle,) than on the back.

Jan. 22. — Sputa much less abundant, their odour less gangrenous, quite distinct from each other, color light-brown; tongue dry, brownish at centre; p. 96, regular; resp. 32; more prostrated, on her back; dejections involuntary; same tumor in abdomen; this not painful on pressure. On percus-

sion on the right in front resonance evidently better; behind, the resonance is a little better at the middle third on the right than on the left, though there is a little difference only. In the same part of back at the right the respiration is feeble, without resonance of voice, while on the left the respiration is coarse, with a little resonance of voice, but without crepitous râle, or gargouillement.

(Rice water sweetened with lemon-juice. Sulphate of quinine gr. xx. Vermicelli. A glass of wine. Enema.)

Three, P. M. — p. 130; resp. 40; sputa about two ounces, more confluent and darker than ever, the odour most completely gangrenous; on her right side; face flushed, hot, moist; drowsy; greatly prostrated; frequent cough, groans, and rattling in throat; deglutition easy; no pain in left side. Respiration much less pure and complete on left side than yesterday; nothing new on the back, but exploration very imperfect.

Jan. 23. — Sputa long, ragged, dark, more gangrenous, floating in water; much cough; great prostration; one dejection, involuntary; p. 132, small, feeble, regular; cheeks much flushed; tongue, lips, teeth dry; skin a little yellow; anxiety and moaning, but without suffering anywhere, as she says; voice embarrassed; recollection very imperfect. On the back, at the left, midway, a little resonance of voice, and the respiration is sometimes a little bronchial; sometimes a little crackling and a little râle there.

(Same prescriptions. Laudanum grs. xxx, in Enema. Sinapisms to thighs.)

Two, P. M. — Face pale, yellow; heat; p. 120; resp. 48.

Jan. 24. — Seven or eight sputa, whitish, opaque, not finely aerated, not fetid; breath scarcely fetid; p. 124, feeble, regular; resp. 36, high; great prostration; countenance expressive

of astonishment; answers short; pupils rather small; tongue soft, grayish, not red; abdomen meteorized, without pain.

(Sulphate of quinine gr. xxv. Enema with rhatania and forty-five drops of laudanum.)

Jan. 25. — On her back, excessively feeble; p. 128, regular, rather full; resp. 40, high, with a noise; cough frequent yesterday, without expectoration; tongue crusted, dry; consciousness imperfect; has taken liquid nourishment very freely, and asks for solid food.

(Prescriptions the same. Sinapisms to legs.)

Five, P. M. — On her back, with mouth open; resp. 48, with a rattle in throat; does not speak, but has not entirely lost consciousness; no sputa; breath fetid; no diarrhœa; skin warm and moist.

Died in the night following.

Autopsy, Jan. 27, ten, A. M.

EXTERNALLY. — No infiltration of lower extremities; no lividity, unless a little on the legs; no cadaveric rigidity; fat five or six lines over thorax, three or four over abdomen.

HEAD. — Infiltration under the arachnoid very moderate; cineritious substance rather pale; medullary slightly marbled; two drachms of serous fluid in each ventricle; consistence of all the organs natural.

CHEST. — *Larynx*, *trachea*, *bronchia*, pale, natural.

Heart. — Pericardium distended, as if with air, contains about half an ounce of reddish serous fluid. Heart itself of ordinary size; extremely flaccid, changing form with every change of position, and flattening from its own weight; a white patch on its anterior surface, an inch in diameter; left ventricle a little thinner than usual; the cavity rather large and of a pale red internally; containing a pretty firm, reddish, fibrinous

coagulum; right ventricle very thin, half a line, quite easily torn, of same color internally as the left.

Right lung, large, light, not collapsing, but preserving its form most remarkably; passing nearly an inch to the left of the median line; with some adhesions, not firm, over a small space laterally and posteriorly, a little below apex, but none anteriorly, nor at base; vesicles dilated over the whole surface to two or three times their common size; bronchia not manifestly dilated; slight engorgement at base, but crepitation there, and on incision a flow of reddish, frothy, liquid; not granulated at this part; penetrated by the finger a little more easily than usual.

Left lung, universally, though not very firmly adherent to the surrounding parts, except to the diaphragm and vertebræ; the two lobes also adhere to each other; on removing the false membrane from the upper lobe, the pleura is seen polished, though not perfectly; over the lower lobe the false membrane is infiltrated with a considerable quantity of reddish serous fluid; in detaching this membrane from the vertebræ and diaphragm, a cavity about to be described is laid open, and from it flow about eight ounces of a dirty, gray, gangrenous liquid. The left lung smaller than the right; the vesicles dilated over a considerable portion of the upper lobe, though less than in right lung; otherwise this lobe is healthy, crepitating; its bronchia pale, thin and transparent, containing a small quantity of an opake, white fluid. In lower lobe, following the bronchial tube, which leads to the lower part, at about two inches from its origin, we open into a cavity, where this tube is cut short; and the same happens to two others. The cavity is about as large as a fist; its parietes are of a dark gray color internally, having an unequal or rough surface, while the cavity has numerous partial divisions formed by the

intersection of imperfect membranes; the internal surface is lined by myriads of little filaments, whose loose ends are seen to float like moss, when the parts are immersed under water; these filaments vary in size, and to several of them portions of fetid, yellowish, pulmonary substance is attached; the cavity is not lined by any false membrane. At the lower part the cavity seems to be bounded almost immediately upon the diaphragm, to which indeed the diseased part extends. The parts surrounding the cavity, and indeed all the rest of this lower lobe, is of a livid red color, not crepitating, not floating in water, almost destitute of air; yielding by pressure a reddish fluid, which is of a livid, not scarlet color; not granulated, nor very friable; neither like spleen, nor like liver in aspect; while all the bronchia are pale and natural, even those leading to the cavity.

Abdomen. — *Pharynx and œsophagus* natural. *Stomach* larger by two thirds than usual; containing a little thin, yellow liquid, and scarcely any mucus; posterior face of same color as the fluid contained, the anterior grayish; mucous membrane very slightly mamelonated over an extent of two inches near pylorus; strips on the great cul-de-sac two to three lines, on the anterior face six to ten lines, on the small curvature twelve to fifteen; this membrane thicker on the anterior face than at larger curvature, but generally may be called healthy.

In front of the vertical portion of the duodenum is found a *tumor*, which is bounded as follows, besides the duodenum, viz.; above by the colon, just at the angle of the ascending and transverse portions of this intestine, below by the crista ilii, on the back by the vertebræ, and, in front of these, by the vena cava at the left. The tumor measures from above downwards three and a half inches, and in breadth four or five. Its contents are ten or twelve ounces of blood, mostly liquid, but

partly in coagula. Its internal surface is a little unequal, and of a livid red color. It is not lined by any distinct membrane; parietes two to three lines in thickness; the cellular tissue surrounding is blackish and blue, from infiltration of blood, though without coagula; this color extends to the mesentery, mesocolon, parietes of the intestines, &c.

Small intestines, a little larger than usual; contain not more than three ounces of a yellow liquid, and a very little mucus; the internal surface of a deep yellow color in the first third, the rest white and pale; mucous membrane of ordinary thickness, giving strips of two to three lines in the first half, five to six lines in the last half; thirteen patches of Peyer's glands discovered, the first at the eighth foot from duodenum; these are quite pale, and the first six or seven are seen only upon close inspection; Brunner's glands are first seen just below the middle of the intestine, but are not very distinct, except in the last four feet; here, especially at the last part, they are rather numerous and large; in the last six inches many have black, central points. Mesenteric glands corresponding to upper parts of a whitish gray, and small; those corresponding to the last foot redder, and decidedly larger. The whole mesentery marked by small black spots, like ecchymoses.

Large intestines contain a small quantity of pultaceous feces; mucous membrane pale, of ordinary thickness; strips four to five lines in cæcum, ten to twelve in the rest; Brunner's glands not seen in great numbers throughout, least in the middle, most near to the extremities, with black central points, not enlarged.

Liver contains very little blood, pale; or of a pearl aspect, like putty; rather easily penetrated by the finger; extending up to fifth rib; of good size.

Gall-bladder contains considerable quantity of yellow bile.

Spleen, larger than common by one third; at upper extremity a yellow, gray, opake spot, of one inch in diameter, and a little cavity, as big as a pea, containing a grayish, pultaceous, gangrenous matter. A small supernumerary spleen of the size of a marble.

Pancreas, in the upper part a little abscess as big as a pea.

Kidney,—*left*, membrane thin, diaphonous throughout, and not peculiarly adherent; texture of the organ rather pale, of ordinary consistence; at the surface, upon external edge, two patches, each half an inch in length, one third in breadth, and two lines in depth, of a yellow, solid, firm, not shining matter, resembling in aspect some forms of cartilage, but too hard for that; no peculiar adhesion of membrane at these spots; texture immediately surrounding them of same aspect as in the rest of the organ.

Bladder, natural.

Vagina contains a considerable quantity of white, opake, not very liquid fluid; internal membrane redder, but less wrinkled than usual.

Uterus, *ovaries*, nothing peculiar. After boiling, the epithelium is seen extending up to the neck of the uterus; it is decidedly thinner than that of mouth and œsophagus.

By the Editor.—The striking circumstances, when this case is first introduced to us on the 19th of Jan., are the great and wretched prostration, frequent pulse, dyspnœa, cough and fetid sputa. All these symptoms, except the fetid sputa, might exist without the gangrene of the lungs. On the other hand, the gangrene may occasion fetid sputa without inducing extreme prostration. It appears that in this patient great feebleness followed the injury of the 1st of Jan., and that the strength declined from that time, though the prostration was not extreme

till gangrene occurred. The patient's previous habits had, no doubt, much to do with this miserable termination.

In regard to physical signs of disease in the lungs, on the 19th of Jan. we get none except below the right clavicle, and there only a coarse respiration. This, at least, was all which was observed in the morning; but, probably, the exhausted state of the patient prevented an accurate and full exploration of the chest. At evening there was a deficiency of respiratory murmur, and a slight râle on both sides of the back. The next day (20th,) there was a mixture of gurgling and crepitous râle on the left side of the back, below the scapula. On the subsequent days the physical signs varied greatly; at one time a cavity, containing a liquid and admitting air from the bronchia, with parietes in different stages of inflammation, was indicated by the gurgling, crepitous râle, bronchial respiration and resonance of voice; at another the subsidence of the worst signs, and diminution of others, seemed to show a real amendment and a return of the organs to a more healthy state. But this last conclusion could not be adopted, while the rational signs showed, so plainly, that the disease was tending to a fatal termination. Even on the 24th, when the sputa ceased to be fetid, and the breath was scarcely so, no good hopes were justified. By attending to the appearances post mortem, we may obtain an explanation of these seeming inconsistencies.

In the right lung we find only a vesicular emphysema, probably not recent, and some want of the natural consistence in the texture of the lungs, which may be referred to the great diminution of vital power in the last few days of life. It is in the lower lobe of the left lung that we find the great disease. In this lobe, at its lowest part, is a cavity, formed by

the breaking down of the gangenous lung. This was in communication with one of the bronchia; but it is not difficult to understand why the contents of this cavity, in the midst of a mass of half dead lung, were not expelled, when the patient was under a state of extreme exhaustion. At an earlier period, when the gangrene was less extensive, and life not so far gone, a portion of its contents were expectorated. But the tension of the parts was subsequently destroyed; and in order to continue the expectoration, greater efforts for the evacuation must have been made at a time, when the power to make them was lessened.

The tumor in the abdomen might well have been thought to be some organ, enlarged in consequence of the injury inflicted on that part. But the dissection discovers a remarkable effusion of blood, which possibly might have been removed by the efforts of nature in a healthy subject.

The appearance of gangrene in the spleen, could not have been anticipated. Nothing is said of the diaphragm over the spleen; but one is tempted to suspect that the gangrene may have extended from the lung above to the spleen.

It is highly probable that the little abscess in the pancreas had its origin in the external violence, to which the patient had been subjected.

CASE XXIV.

PHTHISIS.

Hospital la Pitié. Ward St. Charles, 30.

Under the care of M. Louis.

Feb. 3, 1833. — Bretean, a woman, æt. 30. Hair black, eyes dark brown; born at Paris, and nursed at her mother's breast; father died, æt. 49, his disease not known to her;

mother, 63, alive, has often "vomited blood," and has had a cough for the last six years, otherwise well; had one sister, who died at 30, having "vomited blood, coughed, and become consumptive;" — had one child at 23, who died at 11 months of a "cerebral fever," as the physician said. She began to menstruate at 12, and was always regular till August last; did not suffer much at monthly periods, most commonly had a diarrhœa preceding them, and from 20th year almost constant leucorrhœa in intervals; breath short from infancy, could not run as well as others in childhood; subject to catarrh since her 15th year, but this never severe; had no swelling in throat, nor elsewhere in her youth; never seriously ill, even for a week, until her accouchment; from this she did not get up well; the lochia stopped prematurely, she had severe diarrhœa for fifteen days, though no pain in abdomen, nor vomiting; she had however some dyspnœa, but without pain in the chest and without cough. Since 14th year she has worked in pearls.

In June last she began to cough and expectorate; grew worse in August, and then left work, and since that month no menstruation. She had not had catarrh the last winter. Though the cough was not severe in June and July, the sputa were thicker than now. In August, her cough produced pain in chest and then she expectorated some fillets of blood. Since August, has had sweats about the chest, which have not been increasing. Before her illness ate three quarters of a common allowance, since then not more than one quarter. Thirst in the autumn more severe than now. Has emaciated from June; in her catarrhs formerly, never emaciated, though they usually continued six weeks. Lies best on her right side, formerly as well on one, as on the other. Does not feel the air enter unequally at the two sides. No diarrhœa; for the last two months pain low in abdomen.

Now, skin pale, as always, she says; intellect and memory good; some greenish sputa, irregularly round, but not properly ragged, mingled with some white, frothy liquid, like saliva. Below right clavicle percussion decidedly more sonorous than below left; here it is somewhat flat, and it becomes more so in descending to the left mamma, where it is perfectly flat. Also, below left clavicle, on percussion, there is the sound of a cracked jar, (bruit dé pot felé.) Here also is a sub-crepitous râle, but not evident gargouillement; at four or five inches below the clavicle, over the mamma, there is gargouillement, and the same under axilla, and, two inches below this, expiration very slight. On the back, below the scapula, percussion clear on both sides; a little obscure at the left, two inches above the lower angle of the scapula. On the right, behind, for two inches from the summit, respiration tracheal without any râle; also bronchophony there, though not pectoriloquy; below, near vertebræ, a little sub-crepitous râle, or a blowing, (sifflante.) On the left, behind, the same, except that the tracheal respiration is less manifest, and there is a sub-crepitous râle, in its place. Below the right clavicle respiration coarse, bronchial; and, lower down, a little mucous râle. About the left clavicle, above and below it, more hollowness, or depression, than about the right. In the right hypochondrium, in the region of the liver, over an extent of two inches, some resistance on pressure, not very perfectly marked, and in the same part some sensibility on pressure. Voice natural. Tongue a little red, but moist; thirst acute in August and September, now very little; appetite and digestion pretty good; no diarrhœa; p. 88, small, feeble, regular, though examined after exploring the chest; no palpitations; no headache; no sore throat; deglutition easy.

(Infusion of marsh-mallows, sweetened. Gum potion. A quarter of a loaf of bread daily.)

Feb. 5. — Pain in middle of breast and back, none on side. Can now lie on left side. Some resistance in right hypochondrium.

Feb. 6. — Percussion a little flat over the left scapula; at the left summit bronchial respiration, and resonance of voice, but no gurgling. On the right a little gurgling above the spine of the scapula; above this a little crackling (craquement;) and at the very summit respiration almost cavernous; at the same point pectoriloquy, or nearly this. Percussion in front, sonorous at the right, flat at the left, more so in going from above downwards. Diarrhœa yesterday.

(Gum potion with half a grain of watery extract of opium.)

Feb. 7. — More cough; no sleep; expectoration difficult; no dejection.

(Extract of opium increased to one grain in same potion. Enema.)

Feb. 8. — Expectoration more difficult and less abundant; gums painful and somewhat swollen. Scarcely any sleep; no sweat; p. 96; resp. 36. On the left breast the sound of a cracked jar is not heard on percussion; no râle there; perfect pectoriloquy at right summit behind, with tracheal respiration. Expiration heard nearly to the lowest part, on both sides, behind.

From this time to the 20th of March, when she died, the cough was urgent and the expectoration difficult; the sputa were opake, and somewhat indistinct, ragged, firm masses, and seldom, if ever, copious; she had pain in the breast and through to the back, but not in the side; the right hypochondrium lost the feeling of resistance on pressure, and became supple; on the 14th of February there was first noticed an embarrassment in the throat affecting her voice; this embarrassment increased so as to render deglutition difficult, and on the 6th March, on

attempting to drink, the liquid passed out of her nose; at this time nothing seen in fauces; diarrhœa at times increased, but without much pain; and night sweats sometimes occurred; yet the pulse grew less frequent, so that from being 96, on the 8th, they were 90 on the 18th; 84 on the 19th of February; and on the 4th of March, 78; and were marked, as not accelerated, within two days before death. As to physical signs, gurgling was heard, successively, at the summit of the chest behind and in front on the right side; also on the left, over a large space at the summit behind, two inches below the clavicle, and in the axilla; in this last region was also heard cavernous inspiration and expiration and pectoriloquy; and expiration was heard everywhere, but more at the right than the left, on the lower half of the back; and the sound of a cracked jar was perceived at times, slightly, below the right clavicle.

(Prescriptions various; anodynes, leeches once on neck, &c.)

March 20, in the morning, pain in the right side; countenance extremely changed, pale, bloodless; several little caseiform deposites on the tongue; six dejections; excessive suffering. On percussion very sonorous on the right back; on the same, at lowest part, *bruit de frottement;* on the right side respiration audible.

At one, P. M., this day, she died after a horrible agony.

Autopsy, March 21, ten, A. M., twenty-one hours after death.

Exterior. — Body perfectly cold; marasmus in the last degree; no discolorations, nor œdema of the lower extremities.

Chest. — *Heart* of moderate size; no trace of false membrane externally; three ounces of yellow serous fluid in the pericardium, with some little flakes; large coagulum of fibrin in the right auricle.

Left lung, adhering in every part to the pleura costalis; the lung firm, hard in its whole extent, scarcely exhibiting a point

healthy. *Upper lobe*, at the summit behind, has little excavations, of an inch and less, which communicate with others below; in some of these excavations a commencing false membrane, in most of them none; the bronchia open into most of them; some of these bronchia are dilated, their mucous membrane red and thickened, one of them ulcerated, and, to the extent of two lines, entirely destroyed, so as to show the parenchymatous substance for the base of the ulcer; the rest of the apex occupied by little cavities, and opake, yellow tubercles, with some small, semi-transparent tubercles, and, at the centre, some large tubercles, more or less opake; these tubercles are some of them confluent, or congregated in masses, others separated by small portions of a healthy tissue; in the lower part of this lobe is a narrow cavity, three inches long one, to one and a half deep; the lower part of this cavity is lined by a matter alternately gray and yellow, opake, rather firm, in many parts two to three lines in thickness, of a dull aspect, and not crying under the scalpel; this matter is subjacent to the pleura, and they are separated from each other by matter of a firm, reddish texture. *Lower lobe* has, for two inches from its summit, yellow, opake tubercles, and a multitude of little, irregular cavities, without any false membrane; for two and a half inches below this portion, it has a great number of semi-transparent granulations; these cease two inches from the base, and in this portion there is a little hepatization.

Right lung, adhering except in the lower quarter; being removed with the costal pleura, there is seen a little opening, or hole, at the upper part, communicating with a large cavity in the upper and posterior part of the lung, more than two inches from top to bottom; in this cavity a quantity of reddish liquid; its walls constitute a sort of cup, one to two lines in thickness, and, in some spots behind, covered by pulmonary

texture, not more than half a line in thickness; several bronchia communicate with this cavity; in front of this cavity are several small ones; the large cavity is lined with a grayish matter, (detritus,) which is so friable that it cannot be removed, in the form of a membrane; beneath this is an unequal, polished, grayish, thin membrane; the rest of the upper lobe is transformed into a tuberculous, gray matter, separated by an infiltrated, gray, semi-transparent matter, the whole matter being harder than a hepatized lung; pressure on this portion of the lung produces a very little air, which seems to come from little cavities. *Lower lobe*, to the extent of an inch and a half from its summit, is in the same state as the lower part of the upper lobe, just described, which is contiguous to it;* these morbid changes stop suddenly, and the lower part of this lobe is comparatively healthy, for four inches from the base; it is, however, engorged, red, less coherent than a healthy lung, contains a few semi-transparent granulations, and one or two opake masses.

Neck. — *Pharynx* presents laterally, and behind the os hyoides, an oval depression; this is two lines in length, and one and a half in breadth, is encircled by a little red line, within which the epithelium is wanting. *Epiglottis* pale and thin; and, on the right inferior corner, is a little, button-like elevation; this is fleshy, pale, destitute of polish and of mucus. *Larynx* healthy. *Trachea* red; this redness is in the mucous and sub-mucous textures; the mucous membrane not thickened, giving strips of twelve to fifteen lines; little crypts seen beneath it.

* The middle lobe is not mentioned. Perhaps this was closely adherent to the upper lobe, and, being examined from behind, it was not thought of, and was confounded with the upper lobe. Such an oversight easily takes place under the circumstances here supposed.

Abdomen. — The *peritoneal cavity* contains about two pints of liquid, clear and slightly yellow. *Stomach* contains a moderate quantity of liquid, in which there are small flakes, and some of these adhere near the pylorus; internal surface generally pale, but has a little redness within two inches of the pylorus; this redness is not continued, but is in points or dots, and similar dots are scattered slightly over other parts; a portion, about three inches in length, about the middle of the anterior face, mamelonated unequally, and, in this part, the mucous membrane thicker than elsewhere; mucous membrane everywhere softened, except at the anterior face, where the strips are from two to four lines, and in the small curvature, where the strips are from five to six lines; the longitudinal muscular coat is prominent, or raised in some points, and near the pylorus, for two inches, it is from one to two lines in thickness. *Small intestines* of moderate volume; in the first half some yellow mucus, in the last quarter pulpy greenish matter, in the interval gas only; the mucous membrane pale throughout, normal as to thickness and consistence; in the last two feet, three patches of Peyer's glands, which have each twelve to fifteen tubercles, of the size of a pea, ulcerated at summit; mesenteric glands a little more voluminous than common, some of them red. *Large intestines* very small; cæcum containing matter, some of it green, (above) some whitish, (below); except the cæcum, these intestines are of a more or less vivid red throughout, and the parietes thicker than common; in the first foot, the mucous membrane of normal thickness; below this two or three times thicker; in the first eighteen inches, the strips from two to four lines, in advancing toward rectum they grow less, and at last there is mucus only; five ulcers in the cæcum, irregular, half an inch, grayish, with gray, semi-

transparent granulations at their centre; in the next ten inches four oval ulcers, each five or six lines in length; in middle of colon eight or ten more, at the bottom of which is some gray, semi-transparent matter; also one or two ulcers near sigmoid flexure; the subjacent cellular tissue thick and white; the muscular coat also much thickened. *Liver* rather large, somewhat of a chesnut color; at two inches from the free edge a depression, which corresponds with the edge of the ribs, and is two and a half inches in length by one in depth; more granular than natural; alternately yellow and brown. *Gall-bladder* contains a liquid of the consistence of molasses, and of a deep green color. *Spleen* natural. *Kidneys* small, pale, otherwise natural. *Bladder* healthy, almost empty. *Uterus* small, eighteen lines in length; contains considerable quantity of viscid, transparent mucus, some of it projecting from the mouth; internal surface pale, healthy.

Head. — Little *arachnoid* infiltration. *Pia mater* not much injected. *Gray substance* of a little deeper color than common, and *corpora striata* the same. Half an ounce of serous fluid in each ventricle. *Cerebellum, medulla oblongata, &c.*, healthy.

[To this case the following remarks are annexed. I presume that they must, in substance, be derived from M. Louis; but I do not feel authorized to attribute them to him. — *Editor.*]

In this case there was never any pain in the sides, still adhesions existed. Pain is ordinarily noted in such instances, so that this is an exception. Are we to attribute the pain in phthisis to tubercles, or to pleurisy? Unquestionably to pleurisy; for there are cases, in which there is a tuberculous cavity

on one side without pain, and pain on the opposite side, where no tubercles are found, but adhesion is found. Was the tuberculous deposit in this case distributed in the ordinary manner? It was in the upper part of both lungs; but the great cavity on the left side, in the lower part of the upper lobe, was extraordinary. For proofs that the semi-transparent granulations and tubercles are the same, see Louis on phthisis. What are these granulations? They have been thought to be vesicles transformed. But this opinion cannot be supported, for they are found, exactly the same, in other organs besides the lungs; as, in this case, on an ulcerated surface of the intestines, and frequently on the peritoneum. What is the gray matter, in which these bodies exist, as in a matrix? It has been regarded as tuberculous; but this has, by no means, been proved. Does the advanced state of the tuberculous matter in the inferior part of the upper left lobe show, that the tuberculous deposit commenced first in that part? No; for there is also found a large cavity at the summit of the right lung, and that is in a more advanced state than the cavity in the left lung. In regard to the epiglottis, although the disease in it is slight, yet this disease caused the dysphagia. This will be more evident if we remember that a part of the swelling and redness, which exist during life, disappears in the dead body. In small organs, especially, a slight difference of this sort is important in explaining to us the mechanical, or other obstacle to the use of the part. When did the redness and softening of the mucous membrane of the large intestines commence? This cannot be decided; but, very possibly, it was within a day, or day and a half before death. We must keep in mind the extreme rapidity with which inflammation proceeds in enfeebled subjects.

By the Editor. — To the remarks above I have only to add, that a comparison of the post mortem appearances with the physical signs of disease in the lungs, shows the value of these signs. The unusual size of the cavity in the lower part of the left upper lobe was detected at a very early period.

CASE XXV.

PHTHISIS AND EMPHYSEMA OF THE LUNGS.

Hospital la Pitié. Ward St. Charles, 38.

Under the care of M. Louis.

Jan. 8, 1833. — M., æt. 38, widow, of a disposition most peculiarly ugly. Entered hospital Nov. 13, 1832, for chronic headache. This commenced three years since after her accouchment and has never been decidedly relieved at any moment. It succeeded a strong moral emotion. It has never been accompanied by any failure in the functions of the intellect, of sensation, or of motion. Previous to its occurrence the catamenia were always regular, accompanied by slight pains. Since April, 1832, neither catamenia, nor the premonitory pains, nor leucorrhœa; though this had sometimes occurred before. Did not have cholera during the epidemic last spring. Seldom has had catarrh, and not at all for a long time. Always feeble, she has become more so under the headache. Different means had been employed before her entrance here, such as leeches often to the ears, sometimes to the anus, venesection in arm, never in foot, and cautery a little before her entrance; but all without success. Appetite has been lessened since the headache.

Five or six days after her entrance here there was prescribed venesection in the foot without relief; then she had pills of

hyoscyamus with oxide of zinc, with a little relief, as she thought; then a blister to the head, (Dec. 11,) since which she has had no headache. Ten days since she had severe diarrhœa with colic.

Jan. 8. — On evening of the 6th, slight hemoptysis; this lasted somewhat during night and increased on the morning of the 7th, then amounting to six or eight ounces. She was bled at the arm, ten ounces, and from twelve to four o'clock was relieved. The blood from the arm was covered with a firm, yellowish buff, three lines in thickness. In the night of 7th, she spit again five or six ounces of blood; hemoptysis always with cough. On the morning of the 7th, there was a sub-crepitous, a mucous and a sonorous râle, below the right clavicle. She was not examined any farther.

Now, p. 112, regular; countenance natural, rather colored; voice clear; respiration not greatly accelerated; feels no pain, but excessive fatigue; no cough during examination. Tongue moist, a little white; no pain in bowels; constipated for two or three days. On percussion and auscultation nothing unnatural discovered; but there is so much agitation and palpitation, that the exploration is necessarily imperfect.

(Rice emulsion, one mug. Gum potion. Ten leeches on upper part of thighs. Enema, to be repeated if necessary.)

At half past three, P. M. — Has spit a little blood since morning; p. 124, small; skin not very hot; face paler than this morning.

For a few days after this the sputa were colored more or less with blood, but never much; cough not very urgent; p. about 120; undue heat at night by her report. On the 13th, percussion on, above and below left clavicle more sonorous than at right in some points; also respiration louder and more

pure below the left clavicle. Elsewhere, respiration and sound on percussion healthy.

(On 13th, gum potion with two drachms of syr. of white poppies. On 14th, milk.)

Jan. 15. — Hemoptysis last night, three or four ounces. This had nearly ceased on 16th. (Sulphuric acid. Rhatania.)

Jan. 26. — On percussion about the clavicles the difference not so decided as on 13th, but yet a little. Respiration quite pure below the left, but mingled with a sub-crepitous râle on the right from the clavicle to the mamma. Behind, on the right, upper part, sub-crepitous, and at some points a crepitous rale. Respiration a little rude, or coarse, at the root of bronchia, especially on the right. Pulse moderately accelerated. A dejection once in two or three days. Abdomen soft and without pain. Complexion pale, yellow. (Enema. Milk.)

Jan. 28. — Sub-crepitous râle behind at left and right, but at the left through the whole inspiration, at the right only at its commencement. The sputa white, glairy, and a little froth on the top.

Feb. 1. — Two or three inches below right clavicle, sub-crepitous râle ; directly below clavicle, respiration coarse ; less so below the left. Percussion more sonorous below right than below left clavicle. Behind, at the left summit, respiration pure ; at the right coarse and seems farther from the ear ; voice so feeble that it is impossible to decide as to its resonance ; in the lower two thirds, on both sides, there is a fine crepitous râle ; but the percussion behind is more sonorous at the left, than at the right.

(Gum potion with oxymel and four grains of Kermes mineral.)

Feb. 3. — Almost a gargouillement below the right clavicle, and from this to the region of liver, in front, a sub-crepitous

râle ; the same râle on the left from the clavicle downwards. Percussion clear below clavicles, perhaps a little more below right than left. Oppression great ; tongue very white at centre ; no dejections.

(Opiate. Blisters on front of chest. Sinapisms to thighs.)

Feb. 4. — Very much sunk in the morning. Death afterwards.

Autopsy, Feb. 5, at 10, A. M.

EXTERNALLY. — Emaciation considerable ; two lines of fat on the chest, one on abdomen. No redness, no lividity. Very little rigidity.

HEAD. — Nothing remarkable on outer surface of dura mater. Traces of arachnoid infiltration behind only ; arachnoid itself natural. Pia mater very little, and very partially injected. Cortical substance natural. One drachm of serous fluid in each lateral ventricle. The whole mass of cerebrum of good consistence ; so little injected that drops of blood appear only on pressure and at intervals. An extremely delicate lilac color in centrum ovale. Other parts within the cranium quite natural.

NECK. — *Larynx*, *pharynx*, *œsophagus*, natural.

CHEST. — *Right lung*, some cellular adhesions at the base, and at the side and back, midway, over one third the lung ; the former firm ; no adhesions on the upper part. The whole lung two or three times heavier than usual, especially the upper lobe ; hard in portions, with intervening portions not so ; projections where there is no hardness, and in these projections the vesicles are two, three, and even four times as large as natural ; the lower lobe less heavy than the upper, and of a livid rose color, while the upper is of a pale gray ; some few vesicles dilated in the lower lobe ; at the summit in front, several cells much dilated, from one to two lines in breadth. In

the upper lobe several tuberculous masses with some gray points ; also two small excavations, granular, not entirely opake, unequal ; and two small cavities, one to two lines in diameter, filled with pus. The bronchia pale, thin, transparent. *Middle lobe* containing tubercles, though less numerous than in the upper ; some cavities ; two bronchia dilated, and little thickened. *Lower lobe* has several bronchia extremely dilated, from three to five times their natural size, with a sort of valvules in them ; these surrounded by a great number of gray, semi-transparent granulations, not opake, and smaller than elsewhere.

Left lung, free from adhesions ; less heavy than the right ; hardened portions similar to those in the right ; not so many vesicles dilated in the summit in front as on right; but as many behind, an inch from the summit ; mucous membrane of the bronchia of the upper lobe pale, thin, transparent; an inch from the summit to the extent of an inch or two, the texture granulated, gray, and of a light livid color ; also in this lobe gray granulations from one to two lines in breadth, irregular, in some parts forming masses of half an inch in diameter. Lower lobe, numerous, gray, semi-transparent granulations, some slightly opake, but much smaller than those of upper lobe ; several bronchia dilated, from two to four times their natural size ; their mucous membrane, thickened, and a little red ; cartilaginous to their very extremities.

Heart. — In pericardium, half an ounce of serous fluid. Volume moderate, and of sufficient firmness ; a white patch on the front ; cavities and orifices natural.

Abdomen. — *Stomach*, of moderate size ; contracted midway ; containing a yellow liquid, quite unctuous ; internal surface pale, except for one inch near the pylorus, where there is a very little redness, aborescent ; mucous membrane rather

thin, giving strips from two to three lines in the great cul-de-sac, seven to eight in large curvature, ten to twelve in small curvature.

Spleen small, natural in color and consistence.

Small intestines, containing a yellow liquid, not very abundant in the first third; then, a whitish liquid; and in the last three feet, yellow, pultaceous fecal matter; moderate in size; very little mucus adheres after washing; the last half slightly injected, but this is mostly in the sub-mucous tissue; Brunner's glands quite numerous, and rather large in the last five feet; free from ulcerations and from tubercles; strips from six to eight lines in the whole extent. *Mesenteric glands* small, natural.

Large intestines moderate in size; feces pultaceous in the first part, moulded in the last part; mucous membrane injected in many points; Brunner's glands very uncommonly numerous, especially in the first half, where they may be said to be confluent; in the parts red from injections, the mucous membrane is not thickened, and its consistence is scarcely greater than that of mucus, the strips not more than one to two lines at most.

Liver, measuring more in thickness than in breadth by an inch, reaching from the fifth rib to an inch below the crest of the ilium; left lobe small; the right more light colored than the left; not fatty; gall-bladder natural, containing a little yellow liquid.

Uterus and *bladder*, natural.

By the Editor.—In this case we should note, 1st, the chronic headache for three years; 2d, the hemoptysis on the 6th to 16th Jan.; 3d, the physical signs of disease in the lungs, viz.; on Jan. 7th, in the midst of the hemoptysis, a sub-crepitous,

a mucous, and a sonorous râle below the right clavicle. We may presume from this evidence, and all that follows, that there was at this period an afflux of blood to the upper right lobe, and that the hemorrhage was from this part. On the 13th the respiration in the same part was imperfect, not so loud nor so pure as at the left, and the percussion less sonorous. May we presume that now the bronchia were obstructed, so that the air vesicles near the right summit in front did not take part in respiration? Possibly this might be a transient state at the moment of the exploration, for it is different from what preceded, and from what followed. On the 26th, after the immediate effect of the second hemoptysis had subsided, we have again a râle, (now sub-crepitous, which nearly corresponds with the mucous and crepitous râle of the 7th) in the right breast, extending from the clavicle to the mamma. This is not to be referred to the influence of tubercles alone, but to the vascular state of the surrounding parts, a state analogous, at least, to inflammation, either in the cellular, or mucous tissue, and perhaps in both. Corresponding to the summit of the right lung behind, we find similar signs. On the 28th of Jan. we find signs similar to those last stated, observed at the posterior part of the summit of the left lung, even more at that moment than at the corresponding part of the right. At this time the sputa do not give evidence of suppuration or softening of tubercles, but rather of an inflammation in the lungs. On the 1st and 3d of Feb. we have a more full account of the physical signs; the examination seems to have been more complete than before; and as death occurred on the 4th, these signs should accord very nearly with the actual state of the organs discovered after death. Without repeating the account of those signs, we may say that they lead us to look for more disease in the right lung, than in the

left ; and that the results of percussion do not show an exclusion of air from various parts, so much as the auscultation shows defect or embarrassment in the respiration. These phenomena lead us to look for emphysema ; and especially in the right breast, immediately below the clavicle, we must presume that emphysema exists in a well-marked degree.

In the appearances post mortem, we find the results corresponding with our expectations, as regards the lungs. Emphysema is found in various parts, in accordance with the sonorousness on percussion ; and this is true, especially as to the summit of the right lung in front, and that of the left behind. The induration of the right lung, as compared with the left, (not uniformly, but with intervening portions emphysematous,) the tubercles and the tuberculous cavities, all correspond with the physical signs in a very perfect manner.

The dilated bronchia and the emphysema render it most highly probable, if not certain, that this woman had been subject to pulmonary catarrh and dyspnœa at many times in her life. Perhaps this is not disproved by the denial of the patient on the 8th of Jan., when we consider how often people mislead us, as to the past, from indifference, or an unwillingness to satisfy our inquiries, and recollect that her " disposition was peculiarly ugly ;" a circumstance which is stated in stronger language than I have thought proper to copy.

It should be particularly observed, that nothing found within the cranium explained the chronic headache of three years, unless we should attach some importance to the lilac color of the *centrum ovale*.

As regards the functions of the alimentary canal, the notes are less full than usual, and we therefore will pass by the changes discovered in the digestive organs ; except only to remark on the size of the liver, which surely might

have been detected during life, but which is not noticed in the case.

CASE XXVI.

PHTHISIS AND EMPHYSEMA OF THE LUNGS.

Hospital la Pitié. Ward St. Charles, 21.

Under the care of M. Louis.

Feb. 12, 1833. — E. F., æt. 39, a day-laborer, was a foundling and knows nothing of her parents. No catamenia for four months; never had leucorrhœa; has not had any children. Has had palpitation for some years. Has been subject to catarrh, but this has not lasted more than eight days at a time. Has had a cough since Jan. 1832, constantly getting worse; emaciation slight in summer, but greater for four months; since August has worked with difficulty, and not at all the last two months; for two or three months a little spitting of blood, and for two months severe pain in back; diarrhœa with nausea for fifteen days during the prevalence of cholera last spring; appetite variable; extremely feeble; has kept her bed for some time.

Now, face rather red; tongue moist, whitish; thirst for two months; no appetite; natural dejection yesterday; abdomen a little painful on pressure, a little resistance on pressure in right hypochondrium, not circumscribed; pain in neck at times; voice feeble, altered; heat moderate, elevated; p. 92, rather corded; sputa moderately abundant, some of them tinged with blood, mostly greenish, opake, not frothy, but covered in the cup with frothy saliva; copious night sweats.

On auscultation, respiration good below left clavicle; the same below the right, except occasionally some crackling; be-

hind, at the summit on the left, crackling, amounting during cough to gargouillement, at some moments the cough cavernous; the same at the right summit behind, last evening, and now a bronchial inspiration and expiration, also resonance of voice; resonance good on percussion in the clavicular regions and below scapula; percussion everywhere rather painful; when she coughs she hears something crack low on the left side.

(Gum potion.)

Feb. 13. — Feels more feeble; two dejections; countenance paler. Behind, at the right summit, respiration coarse, and bronchophony; at the lower two thirds, on the right, sub-crepitous râle; at left, resonance of voice much less, and no sub-crepitous râle; a very little of this râle below left clavicle; more resonance on percussion at the upper part behind on the right, than on the left; decubiture formerly on the right, now very difficult on that side; sputa yellow, opake, with a little blood; some resistance and a little pain on pressure in right hypochondrium, not in a circumscribed space.

(A small opiate added to gum potion. Milk, soup.)

Feb. 21. — Sputa more liquid since she has been in the hospital. Resonance on percussion greater below left clavicle, than below right; indeed quite flat below right, except near sternum; no resonance of voice below either; behind, in the upper third on the right, and near the vertebræ some crackling, some bronchophony, and a superficial tracheal respiration; in the same parts at the left, the same in less degree and more limited.

(Gum potion with two drachms of syrup of ether. Half a grain of opium.)

Feb. 26. — P. 96, at four, P. M. Face deeply flushed, tongue coated; anorexy; no diarrhœa; headache. Gurgling, cavernous respiration, and especially expiration, at the right summit behind; amphoric sound at left shoulder on cough.

March 5. — Of late diarrhœa.

March 19. — P. 120, face flushed; heat; liver felt two inches below the edge of ribs. Gurgling and pectoriloquy at both shoulders; respiration amphoric at right. On some days, since the 5th, the respiration has been noted as amphoric, and on others as only bronchial and not amphoric. On the 11th, nausea.

March 23. — Pain at epigastrium; nausea and vomiting occasionally; two dejections preceded by pain, palpitation.

March 26. — Little sensibility where the liver projects below the ribs; sensation since last evening of something sticking in lower part of the neck, an inch below larynx; no tumor in neck.

April 1. — Sputa, in part opake and yellow, in part frothy; diarrhœa less. Respiration cavernous, or tracheal at left summit behind.

April 4. — Emaciation has been more marked; countenance shrunk; pain at epigastrium, and nausea on most days of late; diarrhœa moderate and not constant; sputa diffluent, abundant, opake and yellow.

April 6. — In the evening, after supper, suddenly a severe pain in the right side; crying all night; anxiety; increased dyspnœa; eyes more sunken; face contracted. Percussion not very sonorous on that side; no amphoric respiration there.

April 7. — Some flatness on percussion over right side.

April 8, four, P. M. — Great groaning and distress.

April 8, nine, P. M. — Death.

Autopsy, April 10, ten, A. M., — twenty-three hours after death.

Externally. — Nothing remarkable; pale; no œdema; no discolored spots except green color of the parietes of the abdomen. Emaciation nearly of the last degree.

Head. — Not examined.

Neck. — *Pharynx*, *epiglottis*, *larynx* natural; *trachea* red in the lower half, contains much mucus.

Chest. — *Pericardium* contains two ounces of slightly red serous fluid, without any flakes. *Heart* rather pale, of natural size; excessively flaccid and soft, so as to be easily penetrated by the finger; much coagulated blood in the auricles and coagulated fibrine in the aorta; inner surface of aorta and sigmoid valves, of both arteries, of a livid red color.

Left lung does not pass beyond cartilage of ribs; adheres almost throughout; old infiltration at base; a little emphysema of a limited portion of the front edge, or margin; at the posterior part of apex, and covered by parietes of only one line in thickness on the back, a tuberculous cavity, two inches in diameter, containing a thick reddish fluid; bronchia leading to it dilated, and have their mucous membrane red and thickened; near this cavity another, smaller, less advanced, and traversed by cords, (brides). Whole upper lobe thickly studded with tubercles in different stages; the lower lobe has the same, but generally less crowded and less advanced; bronchia, except those leading to cavities, have their mucous membrane pale and thin. Not more than half this lung, if so much, could admit air.

Right lung reaches nearly to middle of sternum, and is emphysematous to the extent of four or five inches along the free edge and to the depth of one inch; adhesion universal; the false membrane over the lower lobe, at the side and base, yellow, not organized, recent; the corresponding pleura of a purplish red and injected; no effusion into pleura. In apex two tuberculous cavities, not an inch in diameter, very recent, having no false membrane, but shreds of loose pulmonary tissue; the bronchia leading to them have the mucous membrane red and thickened more than in other parts, but less than those

leading to the cavity in the left; tubercles numerous, most in the upper lobe, but generally less than in the left lung; lower lobe engorged with blood, in some parts destitute of air, though it has considerable quantity of bloody fluid, is easily friable, not granulated, nor floating in water.

Abdomen. — *Stomach* covered anteriorly in considerable part by liver; of moderate size; parietes very thin, containing little liquid and scarcely any mucus; internally quite pale every where; mamelonated in the great curvature to the extent of two inches; near pylorus mucous membrane very thin, not yielding a strip; in the great cul-de-sac and elsewhere, the strips and thickness as usual.

Small intestines contain much yellow mucus above and pultaceous matter in lower part; about twenty ulcers, small, mostly in the patches of Peyer's glands, pale, and not penetrating to muscular coat; some tubercles on a few of the last patches; strip of two lines only in the last foot of the ileum, and this portion a little red, elsewhere pale and affording good strips, except near the ulcers; sub-mucous membrane not injected. Mesenteric glands healthy; one calcareous mass in the border of the mesentery.

Large intestines contain very numerous ulcers; forty-six counted from a third of an inch in diameter to a size very much larger, besides many small ones; these ulcers equally distributed from cæcum to rectum, except in the third quarter, where there is scarcely one; they are of a dark color, with edges very little raised, some having penetrated to the muscular membrane, others to the cellular only; generally round, but not all of them perfectly so; the mucous membrane generally pale, giving strips from three to four lines in the cæcum, twelve to fifteen in the colon; very few solitary glands.

Liver large, not fatty, descending below the ribs ; the yellow substance predominating greatly over the red, giving to the organ generally a light yellow complexion. *Gall-bladder* greatly distended.

Spleen, small, rather soft, of natural color.

Uterus, small, natural. *Right ovary* had attached to it a little cyst containing a transparent fluid.

By the Editor. — In this case we notice ; 1st, the palpitation for several years ; 2d, the cough for thirteen months before entrance into the hospital, constantly growing worse ; accompanied at a late period by slight, but repeated hemoptysis and by purulent with other sputa ; also by progressive emaciation and debility. These symptoms demonstrate, perhaps, sufficiently, the existence of *phthisis*. 3d. Below the right clavicle a crackling in respiration and flatness on percussion, except near sternum ; at the left summit behind the same crackling, and, during cough, even gurgling ; the cough cavernous at some moments on Feb. 12th, subsequently respiration cavernous or tracheal, also gurgling and pectoriloquy there ; at the right summit behind bronchial inspiration and expiration with resonance of voice Feb. 12th, and subsequently gurgling and pectoriloquy ; on percussion, more flat generally in the earlier days at the left summit behind, than at the right ; below clavicles more flat at right than at left ; at one period sub-crepitous râle below right scapula and at last flatness on percussion on right side, following pleuritic pain there ; 4th, some dyspnœa, and on March 26th, a sense of something sticking in the trachea ; 5th, enlargement of liver, and at a later period soreness in epigastrium with nausea, vomiting and diarrhœa.

From these phenomena we should look for tubercles in both lungs, especially at the upper part, with tuberculous cavities there, of oldest standing at the left on the back part of the apex; also more extensive tuberculous disease in the right lung than in the left, with recent pleurisy at its lower part; some inflammation, or ulceration of the mucous membrane of the trachea; enlarged liver; perhaps disease in the mucous membrane of the stomach, and more certainly in that of the intestines. In regard to the heart, the palpitation of several years might raise a suspicion of organic disease; but alone it would not justify such a suspicion; and, while the patient was under observation, nothing is noted to lead ultimately to such an expectation.

If we look now at what was discovered post mortem, we find; 1st, less disease in the trachea and vocal organs, than might have been anticipated; nothing more than a redness in the lower half of the trachea, and much mucus; 2d, a large tuberculous cavity at the posterior part of the apex of the left lung, with another smaller cavity near it; the rest of the lung, especially the upper lobe, studded with tubercles; the mucous membrane diseased in those bronchia only, which led to the cavities; 3d, in the right lung an emphysema, of which the signs had not been noted during life; the recent false membrane and deeply red pleura; two tuberculous cavities at the apex, more recent than the large one at the left; the bronchia leading to them diseased, like those leading to the cavity in the left, but not so much; fewer tubercles, but more extensive disease of other kind, than in the left lung. Thus the whole disease in the lungs corresponds mainly, though less precisely than in some cases, with the indications furnished by the physical signs. 4th, The liver enlarged; 5th, the stomach not much diseased; 6th, the intestines diseased as was

anticipated, but more extensively than could have been safely anticipated. On this point it may be remarked that the extent of disease in these organs cannot be decided by the symptoms, though its nature may be in most cases.

Let it be noted that the mucous membrane was most diseased in those bronchia, which led to the tuberculous cavities; a circumstance justly insisted upon by M. Louis as evidence that this inflammation is a consequence, not a cause of tubercles. Were it otherwise we should find the same thing in bronchia leading to crude tubercles, which we do not.

CASE XXVII.

PHTHISIS.

Hospital la Pitié. Ward St. Charles, 36.

Under the care of M. Louis.

March 16, 1833. — F. G., æt. 29, seamstress, for sixteen years past. This woman was born at Rouen, of parents, neither of whom had ever suffered from palsy, or difficulty of breathing. The father died at the age of 79, of a disease which lasted only eight days. The mother, æt. 60, is still alive and well. She has had six brothers and five sisters; two of the former are alive and well, æt. 33 and 27; two sisters are also living and well, æt. 15 and 13. The patient has had three children, last six years ago; two died at ages of 18 and 3 months; the other is now 12 years old. Has never miscarried. Has not nursed children.

Present disease first began to manifest itself fourteen months ago, by loss of appetite and imperfect health, though no emaciation for two months, when she came to Paris, and has been here since. The catamenia, which had been always regular

from the age of 13, rather abundant, preceded by pains in abdomen and loins, and flow continuing four or five days, began, eighteen months ago, to be preceded by leucorrhœa. They have not appeared for six past months, and patient has had occasionally slight leucorrhœa during this time. After arrival at Paris, (*i. e.* one year since,) cough began, accompanied by coryza for a month ; very little expectoration. Six weeks from this time, tried to work, (having done nothing since arrival,) and did so for three days, when hemoptysis came on. This was slight but frequent for two months. Last three months never at all. Pain in left side of chest before hemoptysis ; very severe during time of hemorrhage, but none when cough began. Has had occasional pain in right side also. Her voice was hoarse at the beginning of cough. Has never had diarrhœa, though for sometime has had one dejection daily, liquid. Six months since was in hospital, (St. Antonie,) and then had "jaundice," and sweats in night. Heat of skin in evening for six weeks past.

Now, lying on right side, great dyspnœa produced by lying on left, and patient hears a slight noise in chest when in latter position. This inability of lying on left side has existed only since commencement of present disease. Tongue natural ; no thirst ; voice little less clear and strong than before illness. Cough has been very frequent, and expectoration abundant, until within six weeks ; less since ; most so in morning. Some sputa now in cup, white, opake. Pulse 92 ; no headache ; intelligence and memory good ; eyes and hair black. On examination of chest, parietes are a little more sunken under right clavicle, than left. Behind, on and below left clavicle, down whole of front of this side of thorax, percussion gives a sound quite flat, and with that of a cracked jar. Respiration is bronchial, mingled with gurgling, for the space

of five inches, below left clavicle ; respiration pure below right. On back of chest percussion much flatter left than right. Respiration at summit is bronchial and cavernous ; below is only coarse. Resonance of voice well marked at left summit, and in the space of three inches. Bronchophony, and very feeble respiration at right summit.

(Gum potion, one quart. Three cups of soup.)

Five, P. M. — P. 100, small ; skin moderately hot.

March 18. — Tongue natural ; vomited ; one dejection in night. Patient hears a gurgling sound under left clavicle ; loudest when lying on left side ; she hears nothing under right. At top of right shoulder, and in the space of five inches down back, is heard a slight gurgling. Bronchial respiration in upper two thirds of same side, and, below this, respiration is louder than it is on other side, but it is coarse and mingled with a mucous rattle. On percussion left side of back of chest much less sonorous than right.

March 19, five, P. M. — Face flushed ; skin hot ; p. 108.

March 26. — No pain in right hypochondrium.

Four, P. M.—Has vomited a little bile every day for five or six days past, when coughing.

April 1. — Vomiting continues.

(Seltzer-water one botttle.)

April 2. — No vomiting ; cough less ; has slight nausea, but thinks vomiting prevented by Seltzer-water.

April 4. — No vomiting.

April 7, four, P. M. — P. 84 ; gurgling heard below left clavicle ; a prolonged expiration below right.

April 8, half past eight, A. M. — At half past 6, A. M., was as well as during evening previous. At that time was suddenly seized with an acute pain in left side of thorax, and great dyspnœa. Now, these symptoms continue ; resp. 50 in a

minute, very high; speech almost impossible; face, and lips, and hands, violet; tongue and face cool, as in cholera; no vomiting; no dejection this morning; abdomen not meteorized, nor painful on pressure. On auscultation, respiration is heard at right side of chest.

(Antispasmodic potion. Sinapisms to legs.)

Patient died at one, P. M.

Autopsy at nine, A. M., April 9, twenty hours after death.

Exterior of body. — Second degree of marasmus; less than a line of fat on chest; no violet spots. The lower half of right side of chest is larger than left; and it is more sonorous than corresponding parts of the other side.

Head. — Glands of Pacchioni not large, nor numerous. *Arachnoid* injected over an extent of two inches on each side of anterior lobes, where it is a little more friable than elsewhere, though not thickened; slight infiltration under posterior part of membrane. Gray substance of brain is of the natural color; white rather more filled with red points, than usual, and it is a little softened. About one ounce of serous fluid in each ventricle. *Cerebellum, medulla oblongata, protuberance annulare,* healthy.

Thorax. — *Lungs* are in their natural situation; nearly touching each other at their anterior edges. The *right lung* is large, and very slightly adherent at apex. Several hard spots felt in upper lobe, fewer in middle, still less in lower lobe. Some vesicles are dilated, near anterior edge, to the size of a millet-seed. Three quarters of the lung is elastic, crepitating, of a light violet, or whitish color, externally. Some granulations are seen at the points, where adhesions have been ruptured at apex. On cutting this part, many granulations presented to view, of various sizes; some little clear, gray masses; others larger, and others intermediate. There

is also a small cavity, of the size of a nut, lined with a false membrane, and containing tuberculous matter. The bronchial tube, leading to this cavity, is red, ecchymosed, thickened, dilated, and contains a false membrane within five or six lines of its termination. The other tubes of this lobe, leading to the parts filled with granulations, are pale, polished and healthy, as are also the bronchia of the two lower lobes, which contain granulations, but less advanced; very few in lowest lobe, and there only at upper part.

Left lung adheres in part at apex and behind, but the remainder of it is free. The upper lobe is flaccid. At the apex of lung there is an excavation, containing a little red liquid. It is of an irregular form, and without any divisions in it. It is lined by two false membranes, one soft, as if tuberculous, the other firm, and of a reddish-gray color, one third of a line in thickness. This excavation is about as large as a good sized apple. Adjoining it, though not communicating with it, is another, of the same structure, but less in size. A third small excavation, four inches from apex, near anterior edge of the lung, which is almost immediately continuous with a bronchial tube, and this last is dilated to more than half an inch in breadth, to the extent of half an inch from its termination. One of the bronchial tubes still lower in upper lobe, leading to edge of lung, is covered with a false tuberculous membrane; its parietes are thickened, hardened, pale, opake, though they retain a certain degree of polish. Throughout this lobe are many granulations, varying as in right lung. Similar granulations are found in the lower lobe, but much more numerous than in right. At the top of lower lobe is a cavity, of the size of a nut, filled with a reddish fluid, and portions of tuberculous matter. It is lined with a false membrane, and the bronchial tube leading to it is reddened and

thickened. Another, tube leading to a smaller cavity, has many ulcerations on it. Scarcely one third of this lung is capable of containing air.

Abdomen. — The *liver* is large, in consequence of increase of size of right lobe, which is ten inches in thickness. It covers part of the anterior face of stomach. There is a cicatrix toward right side, but the parts subjacent are natural. The exterior is of a fawn color, and internally it is spotted minutely with the same. It is moist, but is not fat. The *Gall-bladder* contains a small quantity of dark-green, moderately viscid bile.

The *stomach* is of about half the usual size, and contains one ounce of white, unctuous fluid, mingled with mucus. This is adherent to the mucous membrane, but it can be entirely removed by the back of the scalpel. The mucous membrane is thrown into numerous folds along great curvature ; it is of a pink hue, or color of the parings of onions, over part of its surface ; more so on anterior face, where covered by liver, than elsewhere. It is more or less injected throughout whole extent of stomach ; but has no mamelonated appearance. Strips of the mucous membrane can be raised to the length of twelve, or fifteen lines, along smaller curvature ; six to seven in part of great cul-de-sac ; five to six on anterior face ; three to four, and six to seven on posterior face. Sufficient thickness of this membrane throughout stomach.

Small intestines contain a small quantity of viscid mucus. In the latter half are seen numerous ulcers, from one to two lines in breadth, and situated, for the most part, on the patches of Peyer's glands, and more or less numerous on each. They seem due to numerous little yellow miliary granulations, some of which are seen around them. The patches, where not ulcerated, are reddened and thickened ; some to the extent of

one or two lines. Beneath one of them there are evident tubercles in the muscular tissue. The mucous membrane is more or less injected and softened in the intervals between the patches. In the first half of small intestines there is less general fulness of the vessels of mucous membrane, and strips of it, five or six lines in length, may be raised in the first three feet, below duodenum; but below, towards ileum, the strips are much shorter.

In the cæcum are five large ulcerations, with some tubercles. The ulcers have raised edges, which are of a reddish-gray color; they are rough at their centres. Three inches below cæcum is one ulcer, two inches in diameter, surrounding the whole gut. Its centre is of a grayish-red color, and its edge is raised as those of the others above-mentioned. Its form is irregular, and it is covered with a sort of detritus, beneath which is the sub-mucous cellular tissue, thickened and rough. A similar ulceration is found in the middle of transverse colon, besides many smaller ones between it and cæcum. Throughout intestine, strips of mucous membrane may be raised to the length of eight to ten lines. *Mesenteric glands* large, red and soft, adjacent to lower half of intestine; small and gray in upper half.

The *kidneys* are of a violet hue, and of natural size.

The *spleen* is pale with minute spots of red upon surface; it is flaccid and soft.

The *bladder* is small; its mucous membrane is pale and healthy.

Fallopian tubes adherent to ovaries, and some slight old adhesions between uterus and rectum. Upon the surface of uterus, and underneath peritoneum, is a small, hard, white, shining, cartilaginous tumor, of the size of a pea; it is not

encysted. The mucous membrane of uterus is rugous and a viscid mucus is found at os tincæ.

By the Editor. — The whole history of this case shows that the disease was tuberculous, and worse in the left than in the right lung. Accordingly, tuberculous cavities are found in each, but more and larger in the upper left lobe, than in the right; also more tubercles and more compression of air-cells throughout the left lung, than in the right. The diseased mucous membrane in those bronchia, which led to the tuberculous cavities, so often noticed in other cases, is a circumstance not to be overlooked. There is, however, nothing noted in the autopsy to account for the violent pain, &c., which occurred a few hours before death. The rupture of a softened tubercle, and a discharge of its contents into the cavity of the pleura, might have been suspected; but no evidence is afforded that this had happened. The disease found in the intestines is of the kind, that, but greater in amount than, the history of the disease led us to anticipate. The enlargement of the liver seems not to have been discovered during life; but probably was connected with the affection under which jaundice occurred.

CASE XXVIII.

PHTHISIS.

Hospital La Pitié. Ward St. Charles, 8.

Under the care of M. Louis.

G. H., æt. 38, a laborer. Born in the north of France, at Paris, about twenty-five years. Her father died in battle, mother also dead; she knows nothing more of either of them. One sister, near her own age, of whom she knows nothing.

Has not lost any brother or sister. Has two children, æt. 6 and 7, well. Has not had any grave disease, that she remembers. Catamenia commenced at 14, always regular till 1st Jan. last, never abundant, continued eight days, and preceded by pains in loins and hypogastrium; no leucorrhæa; married at 24; no children for six years; no abortions at any time; not subject to catarrh, nor, before present disease, to short breath. Hair brown, eyes black, intelligence moderate.

March 26, 1833. — Has been in the hospital since the 14th inst. A slight cough for two or three months before January, then became sick so as to give up work. From that time, loss of flesh and strength; chills at evening, thirst, cough more frequent, pain in the left side of chest, pain in abdomen, and abdomen constantly growing larger; diarrhœa for three or four days only. Five days since, twenty-five leeches to abdomen, after which pain and meteorism lessened; yesterday, ten leeches.

To-day, nothing peculiar in face, except emaciation; decubiture equally easy on either side; respiration accelerated; p. 100, small; heat elevated; tongue, not red, clean at edges, yellow coat at centre; cough rather rare; abdomen large, and quite tympanitic, except at right flank, where it is flat on percussion, and pressure is very painful. On percussion on the right clavicle and above it, less sonorous than on the left; and below, though the sound is clear, not so much so as below the left. Respiration below the right clavicle very obscure; on the back, at three inches from the apex, at the right, respiration bronchial; at the left, in corresponding point, a blowing (sifflement) at the same point; more flat on percussion on the right than on the left; above and below right clavicle more depressed than in same parts at left; the whole breast at the left, even the intercostal spaces prominent; res-

piration very dry there, but not very weak, and without any blowing.

(Enema with laudanum, ten drops. Cataplasm to abdomen.)

March 27. — Tongue white, villous at centre, natural at edges ; dejections numerous ; abdomen tense, sonorous on percussion, except in right hypochondrium, beginning two inches from median line ; no sleep ; pulse small, regular, feeble ; bronchial respiration as yesterday, near apex, behind, on both sides, and bronchophony at same points, over largest surface on the right ; respiration rather coarse in front at the right, where percussion is also less sonorous ; at left, in front, respiration more superficial than at right. Now states that more urgent symptoms began in December.

(Same prescriptions.)

March 29. — Numerous dejections in bed ; abdomen much less voluminous ; no sleep ; no heat ; p. 104 ; cough frequent. At four, P. M., skin cold ; pulse thread-like ; diarrhœa extreme ; much shrunk since morning,

April 7. — To this day the diarrhœa has been very urgent, and on the 1st inst. there was vomiting ; the suffering, the prostration and wasting have been very great ; the swelling of the abdomen has subsided from day to day ; and till to-day the right hypochondrium has been flat on percussion, but now it is sonorous, and also less painful ; to-day only two dejections, and generally less suffering.

(The remedies have been opiates, rhatania, and white decoction.)

April 15. — The diarrhœa has continued moderate ; cough much more urgent ; urine once a day, scanty, and with extreme pain. To-day groans of suffering ; extreme pain in abdomen, which is quite retracted, and not sonorous on percus-

sion in any part; diarrhœa more urgent; tongue a little dry; emaciation extreme.

(Hydrochlor. Morph. a grain and a quarter in solution of gum arabic. Enema with laudanum, twenty drops, twice in the day.)

Died, April 19, at three, P. M.

Autopsy, April 21, nine, A. M., forty-two hours after death.

EXTERIOR. — Marasmus in the greatest degree. No discolored spots. Chest very narrow. Abdomen retracted. No œdema. Upon percussion the sound of a broken jar below the right clavicle, not so below the left.

CHEST. — *Left lung* free from adhesions, pale; no effusion in the cavity of the pleura; vesicles excessively small; toward the edge the lung is rounded; slight interlobular emphysema; internally, some few, scattered, gray, semi-transparent granulations in the midst of a healthy, spongy, crepitating, pale texture; also, an inch from summit, a little tuberculous cavity, half an inch in diameter; in lower lobe some very few granulations like those in upper; bronchia, pale, healthy. *Right lung* adherent universally, pale as the left; an inch above the division of the bronchia, a cavity the size of an apple, containing pus; in this cavity two false membranes, the first rough on its surface, yet soft; this covers the second, which is firm, a millimetre in thickness; and this reposes upon a healthy texture; two smaller cavities at the summit, also filled with a pretty consistent, greenish, homogeneous pus, and lined by a very thin, white, false membrane; the large cavity extends to the interlobular scissure. Immediately at the summit of lower lobe a similar cavity, in size one quarter of the first mentioned. The bronchia entering the cavities, pale and not thickened; none of the bronchia red. *Pericardium* contains one ounce of yellowish serous fluid. *Heart*

scarcely more than half the usual size; contains a moderate quantity of blood. At the origin of the *aorta* several yellow, opake spots. *Larynx*, *epiglottis*, *trachea* pale, natural.

Abdomen. — *Liver*, right lobe enlarged, moderately moist, the light substance most abundant, not evidently fatty or greasy; bile viscid. The *liver* adheres to the peritoneum, adhesion easily broken. Below is a coherent mass, a little elastic, formed by an adhesion, the false membrane thick at some points, between the cæcum and a part of the ascending colon and a portion of the small intestine. Near the lowest part of the ascending colon is a little perforation, two to three lines in diameter, the edges of which are either raised, even and polished, or cut down sharp (coupé a pie;) this perforation opens into a tumor containing feces and purulent matter. *Stomach* of half the usual size; containing a little mucus, rather viscid; scarcely a fold in the great cul-de-sac; the folds pretty numerous in the pyloric half, yet less than in proportion to the reduction in size; internal surface a little blueish along the small curvature, white or yellow elsewhere; some few points perhaps mamelonated near pylorus; four inches from pylorus three depressions, where the mucous membrane is entirely destroyed, these from one to three lines broad, reddish; on the anterior face, near great curvature, over some extent, mamelonated slightly, and in this part covered with mucus; in the same part a (fillon) depression or furrow, eight or ten lines in length and nearly a line in breadth; mucous membrane normal in consistence and thickness; at the mamelonated part, only, a little thicker. *Small intestines.* Adhesions at some few points; small in size; contain a moderate quantity of mucus; mucous membrane natural, except in the last three feet, where it is much softened and slightly reddish. *Large intestines.* Cæcum of an intense red, with a linear

destruction of mucous membrane, which is thickened and softened. In the ascending colon the redness almost disappears; in the transverse colon an incomplete linear destruction of the mucous membrane, which is generally pale, a little thickened and soft as mucus; the same alternation throughout the large intestine, which is generally white, but pink at certain points; no tubercles seen. The rectum, half as broad again as common, in contact with a reddish, purulent fluid; more than half its mucous membrane wanting; where this membrane exists it is in oval patches, from a quarter to half an inch or more in length, of a lively red color, and granulated; the intervals showing the naked cellular texture.

Spleen, small, natural.

Kidneys small, natural. *Bladder* turned to the right side by adhesion to the surrounding parts; of the size of a small apple; its mucous membrane a little violet, and rendered so by a somewhat fine injection of its vessels; otherwise natural.

Uterus, turned over in front and folded in two, also turned to the right; so that very little of it (half an inch) is on the left of the median line. Cavity natural, two and a half inches in length from the mouth; mucous membrane of neck injected and mucus on it, the substance rather red and firm. On the left of the uterus is a cyst, the size of a chesnut, firm, a line in thickness, not entirely opake, having some striæ of a dull yellow color, containing an unctuous, greenish pus, with some parcels of opake, yellow matter. Behind this and a little above it, another cyst, rather larger, with blackish walls; this communicates at its upper part with the intestine, and has a gangrenous odour. Above and behind the uterus is another large cyst; and at one end several yellow, pretty firm, flocculent membranes, loose, or free at one edge; this cyst in one part is in contact with the uterus.

Head. — *Arachnoid* infiltration moderate, seen only between the convolutions. *Pia mater* very moderately injected and of good consistence. At some points we detach with it a small portion of the *gray substance,* which is natural in color and in other respects, except that in front, on the right, it is a little softened. *White substance* very little injected, of natural tenacity. *Other parts* within cranium quite natural.

By the Editor. — It does not seem to me clear whether the tuberculous cavities were all of them open in this case. If they were, the appropriate physical signs were not detected. After death the sound of a cracked jar, elicited by percussion, below right clavicle, might have been produced by the large cavity; but this was not noticed during life.

The phenomena in the abdomen could not well have been anticipated. Chronic peritonitis might have been expected; still more ulceration in the mucous membrane of the intestines and tubercles in some part. The perforation of the intestines, and the limited mischief produced by it, are circumstances too rare to have been thought of.

CASE XXIX.

CHRONIC PERITONITIS; TUBERCLES IN LUNGS AND IN ABDOMEN.

Hospital la Pitié. Ward St. Charles, 36.

Under the care of M. Louis.

Jan. 12, 1833. — B. C., æt. — was born at Aix, and has lived in Paris since her ninth year. Small in stature, black eyes. Was never sick till now, except with the small-pox, at four years of age. Never had hemoptysis. Father died in

his 41st year, disease unknown to her; mother alive and well in her 46th year; one brother, æt. 24, well; one sister died of small-pox and one brother, of disease unknown to her; has not had any children. Menses commenced at 15, never regular, occurring once in two to once in eight weeks, and usually continuing six to nine days, generally preceded, but not accompanied by pain; no leucorrhæa in intervals. Not subject to catarrh.

On 6th of June last, she received a fright on the third day of the catamenia, and these were suddenly suppressed. She was perfectly well at this time. Since that she has neither had the catamenia, nor the premonitory pains; nor has leucorrhœa occurred.

On the 7th and 8th of June, she had dyspnœa, or oppression at the breast. From that period she has had a little cough with very little expectoration; also pain in right side, constant, but varying in severity, and obstructing respiration. Kept her bed the first five days, since then has been at work. Appetite diminished; has not eat more than a pound of bread daily, in health ate two; no thirst; diarrhœa uninterrupted from the beginning; a dull pain in the bowels, not like colic; tenesmus early in the disease, and occasionally of late; emaciation considerable; for two months frequent alternations of cold and heat, and for six weeks night sweats.

Present state, the morning of Jan. 12. — Tongue moist, almost natural; several dejections yesterday; slight meteorism; no heat; p. 84, regular, not full. On and behind clavicles percussion not very sonorous. Respiration more pure below left clavicle than below right. A little resonance of voice below right clavicle, also at the summit behind on both sides, especially on the right.

(Rice water sweetened with quince syrup. Two cups of soup. Gum water with syrup of white poppy ʒ ss.)

Three, P. M. — Percussion less sonorous at the right than at the left summit of the lungs behind.

Jan. 14. — Sweat in the nights. Moderate diarrhœa with pain. Little sleep. P. 88 to 96. Heat.

(Ten leeches to the thighs.)

Jan. 16. — Leeches bled freely, without relief to the side. Now the pain has increased and is pulsating.

(A cataplasm sprinkled with laudanum on the side.)

Jan. 23. — Fever every night; last night much sweat. Right cheek very red, left not at all so. Respiration decidedly feebler below right clavicle than below left; below the former, expiration loud and bronchial, and a marked resonance of voice; at the right summit behind respiration more feeble, than in front; resonance of voice there.

Jan. 27. — To this day diarrhœa with griping has been increasing; pain in abdomen, especially on left side, on pressure only; cough, without expectoration; respiration more feeble, without any râle, and percussion more obscure, at the summit of the chest, both on front and back, on the right side than on left. Now, p. 108, extremely irregular in rythm and force; action of heart also very irregular; its impulse strong and tumultuous; percussion about its region to an inch above the mamma is decidedly less sonorous than on the opposite side; respiration there much feebler than on corresponding parts at the right; no palpitation, nor pain in that region. She has just got into bed.

Jan. 28. — Pulse regular. Below right clavicle inspiration feebler than below left, yet expiration heard in the former and not in the latter; also resonance of voice below the right; at right summit behind, decided vibration felt by the hand lying

on it when she is speaking. Diarrhœa with griping; pain in abdomen felt on motion, as rising in bed; the abdomen swollen, tympanitic, and painful on pressure. Loss of flesh and strength since entrance.

Feb. 2, five, P. M. — Sweat every night of late; flushed usually at noon; p. 108; pain in abdomen less, and only two dejections to-day; twice to-day has vomited food with a little bitter liquid; sensation of weight in lower part of abdomen; no cough, or scarcely any; no oppression.

Feb. 5. — Flushed, hot, much of the day; p. 120, at four, P. M., with severe headache; diarrhœa and pain in abdomen less; nausea this morning, but no vomiting since 2d, nor suffering from food; rather more appetite; emaciation evident, especially on chest; all the physical signs before noticed, at the summit on the right, fully confirmed to-day.

Feb. 6. — The respiration on right side of thorax feebler than the left; a vibration to the hand on the right, not on the left; the pain on the right began two inches below the clavicle, and passed round to the side, extending to the lower part.

(White decoction; prepared from phosphate of lime and gum arabic.)

Feb. 8. — Some resonance of voice at left summit, behind, though less than at right.

Feb. 10. — Diarrhœa has continued moderate. Pulse very irregular and intermittent; (has not been out of bed lately;) almost perfect intermission of pulsation in heart, which is preceded by a double beat; over a small extent in præcordial region resonance slight on percussion.

Feb. 11. — It is doubtful whether she has coughed constantly since June; the only sure thing, on this point, is, that the cough has been very slight. Quite feeble, does not leave bed; much sweat last night, appetite returning; a little meteo-

rism ; pulse regular. Above, below and on right clavicle, less sonorous on percussion than at the left ; below right clavicle respiration bronchial ; at the same place bronchophony ; bronchophony also, extremely marked, at the right summit behind.

(Four leeches to thighs.)

In a clinical lecture on the 13th, M. Louis, remarked in substance that, 1st, the principal and most important symptom, since June, has been diarrhœa. Often, where a diarrhœa has lasted long, it is very easily and quickly cured. But this happens, where there is neither fever nor emaciation. The disease, in such cases, may be referred to a change in the secretory functions. This case has followed a different course, and may be referred to some other change in the intestines. Is there an ulceration of the small intestines ? If so, there are tubercles in the lungs. 2d. Let us then look at the lungs. There we find the physical signs of disease ; especially at the summit of the right lung. 3d. The symptoms of peritonitis have existed for ten or twelve days or more.

Feb. 16. — Diarrhœa has been increasing, for which a little opium has been administered in enema. To-day vomited once. Meteorism more constant. Face, especially about the eyes, has been getting yellow.

Feb. 22. — Diarrhœa has continued ; some sweats ; now much meteorism and sensibility in abdomen.

March 5. — No sputa. Diarrhœa has continued, and on 3d, vomitings of bitter matter. Occasionally, transient acute pain in right side. Resonance of voice and bronchial expiration half an inch from the apex at the right, behind ; the same phenomena at the left, a little lower, but less strongly marked than at the right. On percussion the right clavicular region flat, the left sonorous. Lies on the left side since the acute

pain on the right. Sound of the heart greater immediately below right clavicle, than two inches lower.

March 11. — P. 90, small, feeble, regular. No heat. No vomiting of food for several days. Two to six dejections daily. Chills every day. An expiration can be heard and a little resonance of voice below left clavicle. The other physical signs as before. Less meteorism.

April 10. — Appetite has remained small, but variable; often nausea and occasionally vomiting of food and bitter matter; pain in abdomen always most at the right; diarrhœa not more urgent, though sometimes tenesmus; cough extremely slight. Meteorism has continued, and to-day a little fulness about the umbilicus, and resistance to pressure.

April 22. — Increased emaciation lately. Tongue natural; no appetite; for ten days constant vomiting after food, and sometimes of bile without it; thirst; diarrhœa with occasional griping; some meteorism; a little cough for eight days, without expectoration; no oppression; no pain in back nor in sides; p. 120, small; resp. 24. I have heard her cough for the first time this day, at five, P. M.

(Seltzer-water. Ten drops of laudanum in an enema.)

April 27. — Emaciation increases; vomits all her food; diarrhœa much increased; cough slight; pain in abdomen, none in chest; p. 130, very small.

Died, May 4th, at two, A. M., without agony. Has been sinking rapidly for three or four days.

Autopsy, May 5, at nine, A. M., thirty-one hours after death.

Externally. — Surface pale, except that the integuments of the abdomen have become a little green; both lower extremities very œdematous in their whole extent, the left hand slightly so; not destitute of fat under the integuments.

Head. — Membranes pale, very little injected; glands of Pacchioni rather numerous; slight effusion under the arachnoid, behind only; gray and white substance in every part pale, not injected, rather soft than firm; no fluid in ventricles.

Neck. — *Epiglottis* and *larynx* pale, healthy; mucous membrane of *trachea* red, but of good consistence; *pharynx* and *œsophagus* natural.

Chest. — *Right lung*, adherent in its whole extent, even the trachea to the sternum; the false membrane over the lower lobe somewhat recent, yellow, pretty easily torn, nearly a line in thickness, containing some tuberculous matter; the lung larger and heavier than the left; at the apex of the upper lobe, the appearance of a cicatrix with nothing corresponding to it in the substance beneath; several small opake tubercles on the pleura; no air, or very little, in this lobe; its color a dark violet; its substance firm, and internally dark colored; in the midst of this substance is tuberculous matter in masses of different shapes and sizes, from the head of a pin to that of a pea; among these substances is one, an inch in length and a third of an inch in breadth, lined with a false membrane, containing a white matter, which resembles cheese; no cavern; few tubercles below; those above, some gray, some opake; mucous membrane of the bronchia of this lobe generally red and thickened, without its natural smoothness and polish; one or two of the bronchia contain tuberculous matter; the lower lobe contains blood in excess, is not granulated, nor hepatized, and its bronchia are pale and natural. *Left lung* adherent at its summit, but not elsewhere; in the cavity of its pleura six ounces of serous fluid; similar in its lesions and condition to the right lung, except that the part especially diseased extends two inches from the apex instead of five, and the diseased processes are rather less advanced; a little inter-

lobular emphysema at the lower margin. More than two thirds of the two lungs, taken together, free from important diseased change. *Heart*, small, natural in color and firmness, free from all lesion; the pericardium natural, pale, contains six ounces of citron colored liquid.

Abdomen. — In *peritoneal cavity* eight or ten ounces of citron colored liquid; slight adhesions of omentum to intestines, especially at the lower part, also to the parietes in front and lower part; partial adhesions of the intestines, small and large, especially the former, at the folds; the adhesions mostly corresponding to ulcerations internally; some few small opake tubercles upon the sub-serous surfaces. *Stomach* of a moderate size, containing a small quantity of mucus, not adhesive; internal surface pale, except in the small curvature near each orifice, where the mucous membrane is red, injected; slightly mamelonated, to a small extent, in the large curvature near the pylorus; thickness of mucous membrane natural everywhere; the strips four to five lines in the great cul-de-sac, ten lines on each of the faces, ten to twelve in the small curvature. *Small intestines* of a moderate size; presenting externally some few tubercles at points of adhesion; very friable at these points, where generally the color is dark, corresponding to ulcers within; internally containing a light yellow liquid, not abundant in the first portion; in the last three feet the liquid becoming of a light reddish-gray color; mucous membrane pale in the whole extent, except the last three feet, where it was injected and of a bright red; this colored part thickened, all the rest thin; twenty-four ulcers on the mucous membrane, most from three quarters of an inch to an inch in diameter; these ulcers vary in depth, some of them having penetrated all the coats except the peritoneum; others not having penetrated the mucous coat, this being ele-

vated at their edges; some of them in the longitudinal direction of the intestine, occupying the patches of Peyer's glands; others in the transverse direction, occupying the whole circumference; these ulcers are surrounded by perfectly pale, healthy mucous membrane, yielding strips as long as elsewhere, except just at the edge of the ulcers, where the membrane is thickened; in the last five inches one large ulcer, with a few small patches in it, isolated or in bands, of thickened mucous membrane. Some few tubercles under the mucous membrane, and tuberculous matter on some of the ulcers. *Mesenteric glands* enlarged, tuberculous; many of them of a bright red in the middle, with a flat, or not bright, yellow substance at their circumference. *Large intestines* of moderate size, containing a whitish-yellow, opake liquid, no feces; cæcum red, like the lower part of ileum, with one small ulcer; the mucous membrane of the colon pale, with three or four ulcers, from half an inch to an inch in diameter, the cellular membrane at the bottom thickened; one large ulcer three inches by one and a half at the upper part of rectum, the whole mucous membrane below of a very bright red, with one small ulcer. *Liver*, extends three inches below the edge of the ribs; of a light yellow color; somewhat fat; very friable; containing scarcely any blood. *Gall-bladder* contains light yellow liquid bile. *Spleen*, small; natural in color and consistence; with two or three little, supernumerary spleens, of the size of marbles. *Kidney*, size natural; external membrane easily removed; the surface under it polished; the substance rather soft, and of light color, containing little blood. *Bladder*, natural; mucous membrane of natural consistence. *Uterus*, very small; pale; with a little mucus on the mouth. *Ovaries* natural.

Femoral veins on both sides, distended with coagula of blood; fibrine in concentric layers; the coagula not adhering to the veins, and having no pus in their centres; the veins internally smooth, polished, natural.

By the Editor. — We have here a very extensive tuberculous affection, apparently owing to an accidental disturbance of the functions. There is no evidence that the patient belonged to a tuberculous race; but, so far as it goes, we have evidence to the contrary. The patient believed that she was quite well to the 6th of June, 1832, when her catamenia were suddenly arrested by a moral cause. Diarrhœa ensued at once, among other consequences, and became the most constant and, much of the time, the most prominent symptom. This diarrhœa was not accompanied with much pain; sometimes, early in the disease and even subsequently, tenesmus was added. Cough, pain in the right side and dyspnœa likewise ensued, but were not very urgent, and often ceased nearly, or entirely. Yet, on Jan. 12th, there were physical signs to show the existence of tubercles, particularly in the upper part of the right lung. These signs were yet more decided on Jan. 23d, and 28th. At this period we should note especially the loud and bronchial *expiration*. On the value attached to this sign, see page 340.

The intestinal symptoms clearly point to ulcers in the intestines, and probably in the patches of elliptical glands in the small intestines. After the patient's entrance into the hospital, there were obvious symptoms of chronic peritonitis, which M. Louis has never found to occur except in a tuberculous patient. Hectic fever was established from Nov. 1832. The pulse was 84 on Jan. 12th, and increased to 120 early in Feb.; a

number which it did not exceed till April 27th. Once or twice there were symptoms, which might arise from organic disease of the heart, but they were inconstant and infrequent; and ultimately proved to be functional only. The frequent vomiting, at the latter period of the disease, might have led to an expectation of some greater change of structure in the stomach, than was actually discovered after death. The physical signs obtained by percussion and auscultation, even to the last days, on which the chest was explored, together with the absence of expectoration and slight cough, pointed out with great exactness the state of the lungs as ascertained after death. It may be useful to review these signs in connexion with the appearances post mortem.

Jan. 12th, percussion on and behind the clavicles, was not very sonorous; and at the summit behind, was less sonorous on the right than on the left; also below the right clavicle, the respiration was less pure than below the left; and below the former and at both summits behind, though most at the right, there was a little resonance of the voice. All this in a chronic case was almost certain evidence of tubercles in the summit of both lungs, but in a greater extent and to a greater amount on the right, than on the left. The subsequent observations almost uniformly confirmed this diagnosis, and showed that the disease was extending more in the right lung, than in the left. Jan. 23d, there was added the important observation that, below the right clavicle, there was a loud and bronchial *expiration* and a marked resonance of voice. Jan. 27th, the greater disease at the summit of the right lung, than at the left is confirmed; and it is expressly stated that there is no râle there. Likewise there was no expectoration. Thus far then there was no tuberculous cavity opened by softening, or suppuration. Jan. 28th, the same or similar results are ob-

tained, and they are confirmed on 5th of Feb. On the 6th, the extension of disease in the right thorax is shown. On the 11th, the greater disease at the apex of the right lung is again shown by the physical signs. March 5th, the increase of the disease on the posterior part of the upper lobe on the right is shown by the bronchial expiration, and the same, less strongly marked, on the left. On this day is noted the greater sound of the heart immediately below the right clavicle, than two inches lower; a circumstance which arose from the more solid medium of sound in the former place than in the latter. March 11th, the increase of disease, at the left summit in front, was shown by the expiration and resonance of voice heard there. After this time the physical signs of disease in the chest are not noted, though the patient lived till the 4th of May; no doubt, because the increased weakness and the trouble produced in the abdomen by any motion, rendered the examination too inconvenient to the patient. But to the last we find the cough rare, and no expectoration. Likewise there was never râle, nor gurgling, nor pectoriloquy. It was therefore to be inferred, that there was not any cavity in communication with the air passages; and, probably, not any extensive softening, if any at all, in the tubercles.

It could hardly happen that the morbid state of the lungs, discovered after death, should correspond with the signs above recounted, more exactly than they did. In the bronchia there were some appearances, which, I believe, to be unusual; but these were such as could not be detected by percussion, nor by auscultation. 1st. The mucous membrane of the bronchia of the upper lobe were, generally, red and thickened, although they were not connected with any tuberculous cavities. 2d. Tuberculous matter was detected in one or two of these bronchia. I leave it to the leading pathologists of the

day, to whom these phenomena will be interesting, to estimate the value of them.

CASE XXX.

CHRONIC PERITONITIS. TUBERCLES IN LUNGS AND ABDOMEN.

Hospital la Pitié. Ward St. Charles, 26.

Under the care of M. Louis.

Jan. 8, 1833. — C. D., æt. 20, has always been a nursery maid. She was born in the south of France, and has been in Paris two years. Her father is living, æt. 60, and is well; he has never had asthma, nor palsy; her mother died, æt. 36, of some epidemic disease; a brother died of small-pox, æt. 4; she has one sister, who is always ill, and three others, who enjoy good health. She has always been in good health, till her present disease began; was nursed by her mother; has always been well nourished; was never short-breathed in childhood. Her catamenia appeared for the first time at 17, and have been regular until within the last three months; they have usually been preceded, for two or three days, and accompanied by headache, general uneasiness and pains, but not sufficient to prevent work; and have not been attended by diarrhœa, nor by pain in the chest. She has never been given to excesses of any description. Her present disease began three months and a half since, during a catamenial visitation. Bis, menstruarum primâ die, invita et absque voluptate, genitalibus etiam valde cruciatis, viri amplexum subivit. She applied hot water to the external organs, and the menstrual flux was suppressed. The day following she had severe pains in the abdomen, dysuria and difficulty in walking, accompanied by heat and swelling of the pudenda; two days afterwards leu-

corrhœa commenced. During the fifteen succeeding days, the leucorrhœa was abundant, and the dysuria severe; there was also anorexy, though little thirst; there were daily two loose dejections, never bloody, and entirely without colic. Since the suppression, the catamenia have never recurred; the leucorrhœa has continued, though not so abundant as at first, but in quality always the same. The appetite has returned in some measure, since the leucorrhœa diminished, but she has never regained the flesh, which she lost at the first. The diarrhœa has been almost constant since it commenced, though she was never subject to this affection previously. A cough began three weeks after the diarrhœa commenced; it ceased three weeks ago. She has always been able to work, and has never undergone treatment of any kind.

Now, Jan. 10th, leucorrhœa continues, but has been very slight, the last eight days; the urine is rendered with ease and without burning; countenance natural; tongue a little white, rather moist; a little pain in throat; slight redness, without swelling of *velum palati;* appetite small, less since entrance; a quarter of a pound of bread sufficient for a day; abdomen sensible to pressure, in every part, and a little sonorous on percussion at the centre, but no tumors in it; some complaint of pain in bowels; two dejections daily; pulse not accelerated, nor large; a little cough for six days past, without expectoration; no pain in chest; respiration easy; percussion and auscultation give no unnatural results.

Yesterday took enema of infusion of flaxseed, and a semicupium.

(Rice water sweetened with syrup of gum arabic. A cup and a half of beef tea. Hip bath. Four ounces of infusion of flaxseed with decoction of poppy-heads, for an enema.)

Jan. 11. — Two dejections. Did not take enema yesterday.

(Continue treatment. Enema twice.)

Jan. 12. — Five dejections, three in night; abdomen less painful; a little meteorized on the right; leucorrhœa almost ceased; heat of skin moderate; p. 100, under excitement of mind; 90 last evening; a little cough since entrance; respiration equally pure below both clavicles.

(Same prescriptions. Cataplasm over bowels.)

Jan. 13. — Four dejections; slight meteorism of abdomen, which is slightly painful; most so towards right side.

(Same prescriptions.)

Jan. 14. — Three dejections.

(Six drops of laudanum in enema.)

Jan. 15. — Seven dejections; pain in abdomen is limited to a small space just below umbilicus, where there is a little meteorism.

(Ten drops of laudanum in enema. Gum potion.)

Jan. 16. —Five dejections; otherwise as usual.

(Rice water as on 11th, two quarts, and in it syrup of white poppy heads, one ounce. A cup and a half of beef tea, or soup. Hip bath.)

Jan. 19. — Leucorrhœa nearly ceased; urine not rendered with ease for three last days, as previously; no itching, nor pain in genital organs.

(Enema with ten drops of laudanum.)

Jan. 20. — Two dejections.

(Prescription as on 16th.)

Jan. 24. — On percussion, near the left summit behind, more flat than in same part at right; below, at the left, sufficiently sonorous. On auscultation, near the left summit behind, respiration is a little soft, not exactly coarse. In front,

on percussion, equally sonorous on and below both clavicles; respiration a little soft below the left; no resonance of voice at this place. Behind the clavicles, the physical signs the same as below them. For three days past, pain between shoulders.

(Same prescription. One grain of opium in two pills.)

Five, P. M. — P. 108; skin hot; below left clavicle respiration is a little less full and expansive than below right; but no difference in expiration there. Behind, expiration is louder at left summit than at right; same difference in axillæ.

Jan. 26. — No sleep; pain in left side. On the back, at the upper part of the lower third of chest, right side, the respiration is a little more feeble than at corresponding part of the left.

(Six leeches to the left side. Continue prescriptions.)

Jan. 27, five, P. M. — Percussion gives much less clear sound below left clavicle, for the space of four or five inches, than below right. Respiration is more feeble in same parts at left than at right, except immediately below left clavicle, where it is louder and coarse. Below right clavicle the expiration is heard, though feeble, but not below left.

Jan. 28. — Sub-crepitous râle low down in back at the right.

Jan. 31, five, P. M. — During three last days, leucorrhœa and dysuria; no ardor urinæ; no itching of parts, except during the flow of urine; more pain in abdomen; diarrhœa less than last week; cough very slight, but causes pain along trachea; this pain exists also without cough; p. 104; resp. 24. At right summit behind, respiration coarse, an expiration is heard, and also a little resonance of voice; below right clavicle respiration less audible than below left, but no expiration.

Feb. 10. — Since last date leucorrhœa has continued, diarrhœa has been slight, headache on 1st to 3d instant, pulse

accelerated, and skin generally hot. Now, on the back respiration is a little stronger, and is more pure and perfect at left than at right, except that at the summit it is stronger at right than at left. The left post-clavicular region is a little more full than the right.

(Rice water sweetened with syrup of quince. Gum mixture with syrup of white poppies. Infusion of marsh-mallows for enema.)

Feb. 16. — For fifteen days, meteorism of abdomen. For twelve nights past, sweat universal, but most on sides of chest; one dejection yesterday. On percussion below scapula, sonorous on both sides; at the right summit behind, a resonance of voice; a little less of it at left, at a place corresponding to half an inch lower than where it is heard at right; a little flat on percussion below the right clavicle; and there there is a resonance of voice, while the respiration is less freely expansive than below the left. Also, an expiration, though feeble, below right clavicle, and at right summit behind; the same, very slight, at the left summit behind, but not at all below left clavicle. The respiration is no where very strong; it is audible over the whole sternum, but more strong in the upper than the lower part, while the sound on percussion is more clear in the latter part than above. At the lower part of left breast the sound on percussion is very clear, as if from stomach and intestines. On the right breast percussion is painful. On the back, the respiration is fuller from top to bottom at left than at right. The sternum projects rather than otherwise; the usual depression below it is scarcely visible; when the patient is sitting up in bed, neither of the post-clavicular regions is depressed; but the right is less sonorous on percussion than the left. Countenance pale; lips violet; tongue moist, thin, of a natural color, except some little red points at tip; bad

taste; deglutition easy; thirst; anorexy almost complete; no pain in throat; speech not painful to throat, but causes distress in middle of chest; eats a little bread, with beef tea, and sometimes a small piece of meat; pain and heat in stomach, oppression and sense of stuffing after eating; never nausea, nor vomiting, nor eructations; loves warm drinks; two or three dejections, liquid, not very abundant, daily, with colics; pain in abdomen almost constant, especially at right side, with sensibility on pressure; meteorism; frequent borborygmi; urine passed with difficulty, with slight pain and burning, two or three times a day; discharge from vagina, either white or yellow, not very abundant, but constant; no pain, but great heat in parts, with occasional itching; no pain, nor swelling in groins; no sense of weight at fundament; resp. 30, not very abdominal; p. 100, small; surface of body cool; headache and unpleasant sleep continue.

Feb. 17. — Vomited yesterday for the first time since abdominal pains began; matter rejected was bitter and greenish. Was cold after bath; face flushed.

(Same prescription as on 10th.)

Feb. 18. — Not much sleep; sweat. Tongue natural; meteorism and pains in abdomen continue; feels worst at night; p. 112, regular, feeble; formerly rested equally well on both sides, but now lies on the right. Respiration a little more coarse at left summit behind than at right; slight resonance of voice there; on percussion over post-clavicular and clavicular regions more sonorous at left than at right; respiration good at left; a slight blowing below right clavicle, without resonance of voice.

(May take milk. Three porringers of beef tea.)

From this time till the 26th, the prominent symptoms were

as follows: — vomiting of bitter, green liquid, every day; pains and meteorism in abdomen as before; two or three dejections daily; chills and heat.

(On the 23d, twelve grains of Dover's powder were ordered daily; on the 25th, that was omitted, and half a grain of extract of opium substituted.)

Feb. 26. — Pain about the region of the liver; no vomiting; pain in abdomen not increased by sitting up; skin hot. Other symptoms as before. Depression of parietes of chest much more marked behind and below right clavicle, and percussion less sonorous there than at left. Respiration heard below right clavicle, more feeble about the left; coarse and stronger at right summit behind; at this last point resonance of voice mingled with a crackling sound; at the left summit behind, expiration more marked than at right.

March 1. — Vomited yesterday twice without cough or difficulty; cough very slight; tongue a little thickened, whitish; heat slight; p. 100.

March 2. — No vomiting; cough in night only; pain in right side of chest constantly. Form of the post-clavicular regions about the same; percussion below the clavicles gives various results; sometimes at one, sometimes at the other, most sonorous; on the back, at the middle third, in the right, percussion is obscure; in the lower third it is entirely flat; and in this third the respiration is extremely feeble, without ægophony, or bronchophony; at this summit the inspiration is strong with expiration; at the left the inspiration is feeble, but very near the summit there is a deep bronchial expiration.

From this time to the 18th, the reports are brief, mostly like those before, but the following should be noted. On the 14th, legs a little swollen; urine only once for three days;

catheter on 15th ; on 14th, a decidedly long expiration was heard below right clavicle, none below left.

(Treatment was as before.)

March 18. — No vomiting except when she sits up ; face a little swollen ; p. 120 ; inclined to drowsiness ; skin not hot. Respiration very obscure low down on back at left ; coarse below right clavicle in both inspiration and expiration ; percussion more sonorous on and behind left, than right clavicle.

March 19. — Discharge from vagina continues in large quantity.

March 20, five, P. M. — Extreme suffering this morning and now ; resp. 60 ; pulse irregular, scarcely perceptible, cannot be counted ; much green vomiting ; does not answer ; takes no notice.

Died on 21st, at one, A. M.

Autopsy.

EXTERNALLY. — *Right thigh* very large ; some livid spots on the external face of each thigh ; most on the right ; round and deep blue spots on right side of abdomen ; same about the breast, of one or two lines in diameter. The fat on chest and abdomen about a line in thickness ; on thighs it is three or four lines ; muscles rather pale.

HEAD. — Slight effusion under arachnoid, and very slight injection of pia mater. Cortical substance pale, and of good consistence ; medullary substance of its ordinary color ; half an ounce of serous fluid in each lateral ventricle ; *corpora striata, cerebellum, medulla, oblongata, &c.*, have all a healthy aspect.

CHEST. — *Left lung* elastic, soft ; not indurated in any part ; vesicles small. Both lungs are perfectly free from adhesions, but do not collapse, are rather light. Their lower lobes contain very little air, are slightly œdematous, flaccid and

of a violet red color. The upper lobe of each contains a few tubercles and semi-transparent granulations; the right contains more than the left, and in the former there is one mass of half an inch in diameter. In the cavity of the pleura, on each side, there are five or six ounces of reddish serous fluid. The mucous membrane of the bronchia is thin, pale, and polished; there are small tuberculous masses in the bronchial glands. On the *epiglottis* there are two or three little red spots; the mucous membrane of the *trachea* is very slightly red through its whole extent, but is of good consistence and of its usual thickness. The *heart* is smaller by one half than usual, but natural as to its texture in every part, and as to its valves. The *pericardium* contains four ounces of clear serous fluid.

Abdomen.—Four quarts of a troubled liquid in peritoneal cavity. The right iliac fossa is generally of a red color, mingled with yellow; the yellow spots are from one to two lines in diameter, they are round and projecting. The redness is owing to a false membrane which is thin and can be raised in strips. In this membrane the tuberculous matter is softened, and beneath it the peritoneum is pale and still covered with some few tubercles. The adjacent parts of the small intestines, for the space of four or five feet, present on their surface a multitude of little projections of yellow bodies, from one to two lines thick, some confluent, others separated and distinct. They are developed beneath the peritoneum, and in this part the convolutions of intestines form three partial adhesions, whereby the calibre of the tube is evidently lessened.

The *stomach* is of middling size; internal surface covered with considerable quantity of very adhesive mucus, and which cannot be removed without great difficulty. The surface is generally of a whitish or greenish hue; its mucous membrane

is very thin; strips from one to two lines in length in the great cul-de-sac; two to three along the great curvature; and of good consistence in small curvature. The surface is not mamelonated anywhere. There are many little points of a dark green hue in various parts, but especially on the posterior face without corresponding depressions or elevations; but the appearance recalled that produced by Peyer's glands when in a healthy state.

Small intestines are one third larger than usual from distention with gas. They are decidedly shorter than usual; the parietes through the whole length are twice as thick as common. They contain a large quantity of green liquid with much mucus. In the last four feet are eight transverse ulcers, all but one of which goes entirely round the organ; three solitary; five are near together. They are generally half an inch broad; their edges are hard and elevated in consequence of the tubercles and semi-transparent granulations contained in them. The edges of the ulcers are gray, — their surfaces grayish or greenish. The mucous, sub-mucous and muscular membranes are very much thickened. The mucous membrane of the intestine is a little softened towards duodenum, and becomes more so on descending, where the strips are almost nothing.

Large intestines are pale throughout whole extent. There is a large ulceration in the cæcum, and some tubercles there. Mucous membrane is so soft, that it may be scraped up like mucus, and has many little grayish spots with central points. There is a thickening, owing to an infiltration of the serous and muscular coats.

The *liver* is large, fatty, with some red lines internally. On its external surface are numerous little gray, semi-transparent bodies like starch, which can be removed, and are found to be in a false membrane.

Gall-bladder, thickened in consequence of infiltration of tuberculous matter. It contains a green viscid bile.

The *spleen* contains a few, little, semi-transparent granulations.

The *kidneys* are natural.

The *bladder* is, at its urethra, of a deep red; otherwise it is pale and natural.

The *uterus* is healthy. Between the uterus and rectum is a false membrane, red, thickened and covered with tubercles, as in right iliac fossa.

The femoral vein of the right thigh is filled and distended through its whole extent by firmly coagulated blood, which does not contain any pus and is not adherent to parietes. These parietes are redder and a little thicker, than those of the opposite side, where the vein was very slightly distended, and by liquid blood.

By the Editor. — This case should be compared with the preceding. In both there was a sudden suppression of the menses in subjects apparently healthy. It will, not however, be easily believed that the consequences would have followed in any one, not predisposed to tuberculous disease. It is to be noted that the genital organs were very tender, at the first, in this case. There was produced an inflammation probably, a morbid state certainly, of those organs; and this was an exciting cause of a distinct disease in the abdomen. It is impossible to decide whether tubercles were formed first in the lungs. If we regard the history of this case alone, it would seem probable that they were formed first in the abdomen. But there is much evidence to show that, usually, tubercles are formed in the lungs, before they are formed in any other part, and this would lead us to doubt, as to this case.

It would seem, 1st, that the disease within the intestines was developed very early, causing the diarrhœa; 2d, that the disease in the peritoneum was formed soon afterwards in the right iliac fossa, causing tenderness in that part. Possibly the tuberculous disease between the rectum and uterus occurred at the very first, when the genital organs were the seat of an acute inflammatory affection.

The connexion of some subsequent abdominal symptoms, such as the meteorism, may easily be traced out.

The rational and physical symptoms both indicated the existence of tubercles in the lungs, but the latter much more strongly than the former. Meanwhile symptoms of both kinds forbad the belief that the tubercles had softened; or, if they had, that they had any communication with the bronchia. There was no expectoration, or none of a purulent character; there was no gurgling, and once only a slight crackling sound even; and no pectoriloquy was discovered, though some resonance of voice was observed at the summit of both lungs, especially the right. This sign was referrible to crude tubercles compressing the vesicles.

The physical signs, which gave evidence of tubercles at the summits of the two lungs, but most in the right, were, 1st. The resonance of voice already noticed; 2d. The expiration, at times quite prolonged; 3d. The absence of full and expansive murmur of respiration; 4th. The flatness, or want of full resonance, on percussion.

These signs were found, back and front, over the apex of the right lung, on the back only over that of the left. The post mortem appearances corresponded to these signs. These are by far the most important points, as regards the lungs.

It may, however, be fair to remark that the other physical signs might have justified an expectation of some morbid phe-

nomena not found within the thorax. In the two lower lobes of the right lung, or in the lower, at least, we ought not to have expected perfectly natural appearances; and under the sternum, projecting as it was, we were authorized to look for emphysema in the margin of at least one lung. Yet the œdema may account for the physical signs which were noticed; and we should think this would be admitted very easily, were it not that there was not the difference in the two lungs, which was indicated before death. May it not be, that the œdema in the left lung occurred at a much later period, than that at the right?

NOTE BY THE EDITOR.

At page 199, it is stated, that some explanatory remarks might appear to me necessary, after seeing the cases in print. Very few, however, have occurred to me as requisite, and those not important.

At page 198, it is said, "I have omitted cases, which did not terminate fatally, &c." It should have been said, "I have, for the most part, omitted, &c." It will be seen that all the cases inserted did not terminate fatally. Those which did not, were admitted on account of their peculiar interest.

In stating the results of auscultation and percussion of the chest, various questions occurred as to the phraseology to be employed. The thorax has been divided into several regions by some physicians of the day, such as the acromial, infra-clavian, mammary, &c., with a view to a more definite reference to its various parts. It would, no doubt, be useful, if some arrangement of this kind were universally adopted. But, if adopted, the terms must be employed in the original notes of the observations. My son did not employ such terms, and if I had substituted them, it would have been with a risk of inaccuracy, as the words he has used are not always synonymous

with those above referred to. I have therefore adhered to the words employed by him, or to such as are precisely equivalent. In speaking of the right and left *side* of the thorax, he does not refer to the lateral regions; thus, by the right side he means the right thorax, or right half of the thorax. He then divides the thorax into the front and back, but for the last word he uses always another, viz.; *behind.* Thus he says, "right side, behind," instead of saying the *right side of the back.* The last expression would have been more immediately understood by all readers, and I thought of adopting it. But in copying there is a difficulty in changing words, which are frequently recurring; one forgets to make the change once in three or four times, and then the confusion is greater. When there is uniformity in the language, it soon explains itself, or rather is explained by the context. Thus, I think the reader cannot fail to discover that, by the words "summit, behind," the writer means the post-acromial region, or the portion of the back above the scapula, considering this as extending inward as far as the vertebræ.

English writers have differed as to the translation of the word *râle;* some have adopted the French word itself, others have substituted rattle, and others have adopted *rhonchus.* The objections to the word *rattle* have been so obvious, that it has not been much employed. For the word *rhonchus* we have some respectable authority, yet it has not met with very general favor, and I have found it hard to adopt it, though at one time willing to do so. The word râle is, in truth, employed in common parlance among us, and I believe in England; and I cannot see any objection to its being fully adopted. There are good reasons in favor of it, such as its easy utterance, compared with rhonchus, and a respect for the inventor of auscultation, which will justify the introduction of a word

from his vernacular tongue. I wish there had been as good a reason for the introduction of all the French words we employ. Besides, râle is the word employed in the original notes of these cases. I have, therefore, continued it.

In looking over the medicines prescribed in the foregoing cases, I find less occasion for explanation than was anticipated, when I wrote the note on page 199. The most important remedies are venesection and tartarized antimony. When the latter is directed, the number of grains is mentioned, but the division of doses is not pointed out. As I understand it, when a certain quantity of this medicine is ordered, it is meant that that quantity should be taken in the course of the day, so divided as that a dose may be taken once in six hours.

Of other remedies, there are none very powerful except opium, and this is usually given in very moderate doses. Where the dose is equal to half a grain, it is specified.

The *syrup of gum* and solution of this syrup, are nothing else than a solution of gum arabic sweetened, with the addition of something to give it an agreeable flavor. I believe that it is the solution which is meant, when the former name is used.

The *gum potion* varies in different hospitals and in the hands of different practitioners, as the white mixture for a cough does among us. In some instances it has a little opiate with it. One of the simplest formulæ for it is as follows, from which that used at the Hospital de la Pitié does not probably differ essentially.

Take of gum arabic half an ounce, syrup of orange flowers an ounce, mix and rub together in a mortar, gradually adding of infusion of wild poppy four ounces.

This quantity would usually be given to the patient at once, with directions to sip it in the course of the day as he should find agreeable. The articles first named, syrup of gum, &c.

are to be taken ad libitum, only the quantity to be used in one day is limited.

An enema is understood to mean an enema of the infusion of flaxseed, of which a pint is usually given. Sometimes the half only is ordered, but I have not been precise in noting this.

There is not any other article, in respect to which any doubt will arise; and as to the strength of the preparation and the doses, I find nothing worthy any further remark.

By strict diet; sometimes the word diet being used alone, it is meant that the patient should abstain from all nourishment except in a liquid form, and of the least nutritious character. Gum water and barley water would be the best articles permitted under this prescription.

END.